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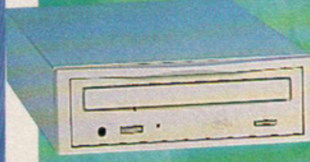
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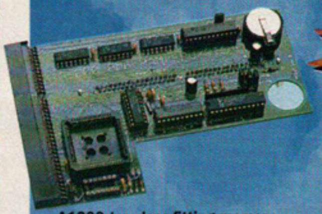
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Month In View

Bizarrely, this month Nick Veitch is so happy he is dancing. Maybe. Oh, let him explain it...



The research for this month's cover feature showed us just how widespread the use of the Amiga is in professional sound recording and it came as a great surprise. Not that it shouldn't be, and not that *OctaMED* and *Music-X* aren't just great, but we thought everyone was still using those horrible STs. Far from it. Even music for games on other platforms is sometimes written on the Amiga, as you will discover. And of course, we have some great commercial music tracks on this CD, so that's something else to have a bit of a song and dance about.

Other excellent news is that Gateway have properly set up Amiga, Inc., (not to be confused with Amiga International), which has its own offices and everything in South Dakota. Amiga, Inc. will be responsible for all the Amiga R&D effort, and people are being hired as I type. An initial staff of around 30 will be coordinating development of the platform, whose first task is thought to be a radical overhaul of Workbench. Amiga, Inc. will also be restarting official developer conferences, the first of which will take place on November 1st at the Midwest Amiga Expo in Columbus, Ohio, followed by one in Cologne and more next year. This is great news for developers and users alike, as new products will be better and take less time to develop.

Obviously, yet again we have tons more news, reviews, features, hints, tips and whatnot stuffed into the magazine this month, so without further ado, I'll let you hotfoot it to the news.

Nick Veitch
Editor



MAKE SOME NOISE PAGE 14
There is more info about music than you could possibly imagine stuffed into our feature, including loads of interviews with top musicians.



MASTERING THE MARKETS PAGE 24
You too could make a million with your Amiga – but only if you invest wisely in the right stocks, at the right time.



FOUNDATION PAGE 39
It looks like it could be a great game – find out how it is being made!



SCANNER SOFTWARE PAGE 65
ScanQuix or *PowerScan* – the top scanning software is put to the test.



MUI TUTORIAL PAGE 84
The long awaited tutorial. I can't understand why we haven't done it before, but it starts now – all you need to know to program your own MUI tools.

AMIGA FORMAT Contents

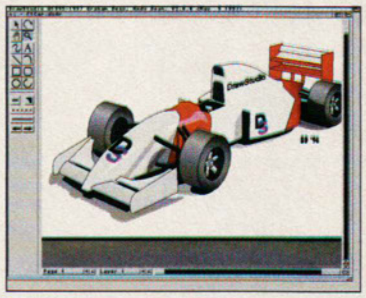
ISSUE 103 NOVEMBER 1997







Ooh, Lens flares... nice.

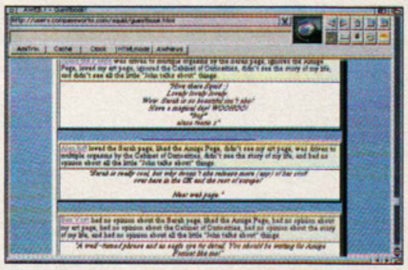




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COVER STORY

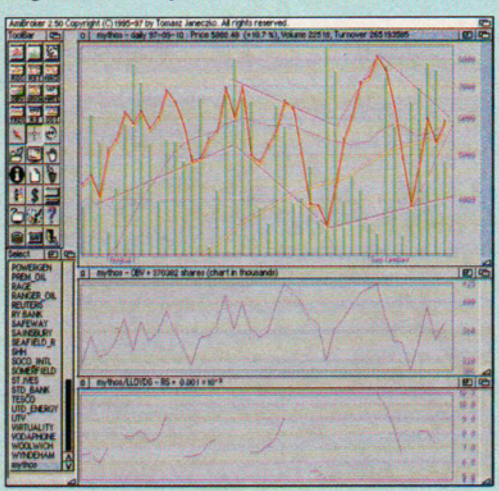
14 MAKE SOME NOISE



Meet the men who've made it! We talk to the musicians and point you in the right direction for some Top 10 success.

24 MASTERING THE MARKETS

Know your bears from your bulls? *Amiga Format*'s very own fat cat **Nick Veitch** does.



AmiBroker is the bees knees when it comes to keeping track of Nick's many, many investments.

CD-ROMS

102 AFCD19

Some great audio tracks, game demos, programming utilities...



COVERDISKS

106 DIGIBOOSTER PRO

Make your own hit tune – then record it!





AERIAL RACERS

Racing mayhem! Plus *Croins* – *Asteroids* brought right up to date.

SCREENPLAY

What's up?

Silent but not still
Gateway reveal discussions with developers

It's not big and it's not clever
Drugs education CD-ROM giveaway

Shooting soon
Vulcan plan *Virtua Cop* for the Amiga

Prizes, prizes, prizes
AF100 competition winners listed in full

AMIGA FORMAT news

Gateway get into gear

Gateway may have been quiet since May, when everyone was shocked to find that they'd bought the Amiga, but that doesn't mean that they haven't been busy. Although little has been officially announced, *Amiga Format* can tell you that the Amiga is now being looked after by not one, but two companies. These are called Amiga International, Inc. which will continue to be run by Petro Tyschtchenko, but will deal mainly with sales and marketing and a second company called Amiga, Inc. which will be headed by Jeff Schindler, the engineer put in charge of Amiga development. Amiga, Inc. will be responsible for new R&D work and licensing and Jeff hopes to have 30 staff working at the new Dakota Dunes headquarters by Christmas.

"...Amiga, Inc. have been busy talking to mainstream software and hardware developers..."

On August 11th this year, the first official meeting took place between the newly-formed Amiga companies and representatives from the Industry Council/Open Amiga initiative, the Jay Miner Society and notable American Amiga users including Jason Compton. Over the course of three days of discussions they talked about the history of Amiga development and future directions it should take. Although everyone has been sworn to secrecy, they all seem very optimistic about the Amiga's future.

This is not the only evidence of movement behind the scenes. Darreck Lisle, ex-president of the Siouxland Metro Amiga User Group has been taken on to act as public relations and events co-ordinator. He confirms that many new employees are being taken on by Amiga, Inc. and all the technical people have strong Amiga backgrounds. He has also said that Amiga, Inc. is in discussion with Newtek, phase5 and Pios and although the important question of what processor to choose for the next generation Amiga hasn't been answered, it seems that the PowerPC is highly favoured where it counts.

The newly-formed Amiga, Inc. have been busy talking to mainstream software and hardware developers and they have announced that they are entering a deal with Epson. Epson will provide Amiga drivers for their scanners and printers (including a TWAIN driver) and give the Amiga equal billing on Epson packaging and manuals. This is a great deal and will no doubt mean increased sales for Epson from Amiga owners visiting big computer stores and seeing the Amiga logo on Epson products. Amiga, Inc. are also in the process of talking to a variety of other companies with regard to getting proper Amiga support for their products in what can only be seen as an extremely positive action.

However, Gateway have been less happy about the huge amount of money they have lost due to a strike by UPS workers. The delivery of Gateway 2000's machines has been hit hard and some estimates say that the industrial action has wiped as much as $530m off the group's market capitalisation. Whether this affects the Amiga at all remains to be seen.

STOP PRESS!
The first official DevCon will take place at the Midwest Amiga Expo in Columbus Ohio on the 1-2 November. See www.amiga.de for further details.

GATEWAY2000
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Snap happy







Ricoh have just announced their latest digital camera – the RDC-300. It offers a 640x480 resolution and 4Mb RAM giving you a maximum of 100 jpeg images at once. Better yet, it's not too expensive at £399. The only downside is the lack of an Amiga driver at the moment, but apparently Ricoh are very keen to talk to any developers interested in making such a tool. They also have a direct colour printer available for the same price, but we have no details on this yet. Contact Ricoh on 01782 717100.

New Siamese software

The new Siamese System v2.1 software pack is now available, without the video switcher card, at a special introductory price of £99.95. This version of the software has full TCP/IP supports for all Siamese functions including RTG, file transfer, mouse control etc. Data can travel over either an Ethernet card (available separately) or over the Internet, allowing for remote controlling of Amiga kiosks and set top boxes. For more details contact HiQ Ltd on 01525 211327 or email them at steve@hiqltd.demon.co.uk

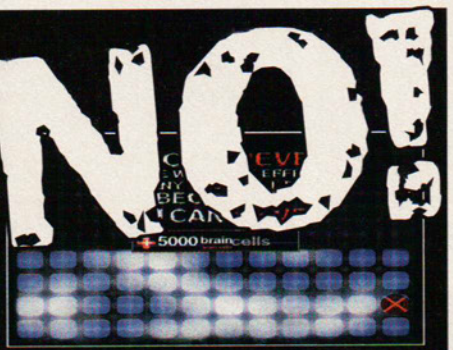
Break the barrier

Thomas Tavoly and the Amiga RC5 team are attempting something quite extraordinary. The RC5 encryption method relies on a huge string of numbers to act as an encryption key for secure data transfer over the Internet. Thomas and co are attempting to break that encryption. Don't worry, it's not illegal, but rather a challenge laid down by the people who created the encryption method. The main difference between the teams trying to break this encryption is that the Amiga RC5 effort is open to any Amiga owner with an Internet connection.

The system works by running a small program on your machine which sits in the background, chewing data at a priority of -20, which means that it only uses whatever spare cycles your processor has and won't affect the performance of your machine noticeably. It needs to be online when it wants new blocks of the keyfile, but will happily work on a randomly-generated block if you aren't online at the time.

At the moment, the Amiga team is lying in 149th place, but with enough machines having a go, Thomas is certain that the Amiga can be pushed to the front. Visit the Amiga RC5 homepage at http://www.cistron.nl/~ttavoly/rc5/ for more details and the RC5 client you'll need.

JUST SAY NO!



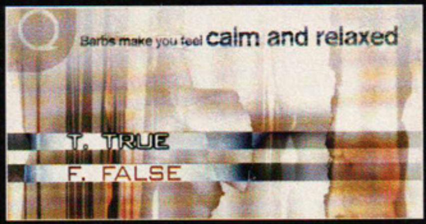
Interactive drugs education through CD-ROMs is the new brainchild of the Health Education Authority, who are trying to dispel a few of the urban myths surrounding illegal substances. They are distributing half a million free copies of their CD, D-Code, throughout the country. The disc contains two hours of dance music (courtesy of the BMG/Deconstruction music label), comedy and gameplay in an effort to make the best use of the medium. Although the CD is not compatible with Amigas, it can be played on a normal CD player, as well as PCs and Macs.

It contains a unique mixing program – *The Arcade of Sound*, which you are granted access to when you answer all the questions correctly and score a million points. In *The Arcade of Sound* you can play with sounds and images in over 50 different screens, mixing jungle, techno, jazz and ambient sounds with graphics. We've got 20 copies of the D-Code CD-ROM to give away to *AF* readers, so send us your name and address on a postcard to 'D-Code Competition,' Amiga Format, 30 Monmouth St, Bath BA1 2BW and the first 20 drawn will be the lucky winners.









Click on a lozenge shaped button and you'll be given a choice of which drug you want to answer questions on. Once you've earned yourself a million points you can enter *The Arcade of Sound*.

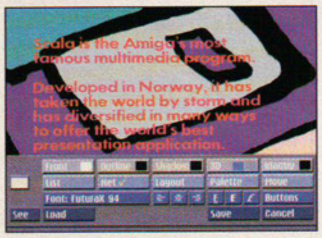
GTI CHARTS AUGUST '97

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6.	(3.)	Aminet Set 4
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8.	(-)	Aminet 13
9.	(-)	Aminet 12
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11.	(-)	p.OS/Geek 2-Bundle
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15.	(26.)	Textikon
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20.	(11.)	Tele-Info Vol. 2



***Amiga Format CD17* piles straight in at number 4 – a fine performance.**



A multimedia delivery package you can carry around – maybe.

A600 add-on

Eyetech have developed a second generation A600 accelerator to overcome the limitations of the first model, and to give A600 users the sort of performance and flexibility formerly only available to 'big box' Amiga users. The board is supplied with a 33Mhz, '030 CPU with full MMU, and a full FPU also running at 33Mhz, and autodetects and configures one standard single or double-sided 72-pin SIMM up to 32Mb. It should enable programs like *Scala MM300/400* (which need an advanced processor and fast memory) to be used effectively on the A600 and has the potential to turn the machine into a portable, multimedia presentation delivery system. Another plus point is that the board is fixed, removably, at five different points to rectify former problems with stability. Priced at £99.95 inc. VAT, you can phone 01642 713185 for further information.

MOVIE MAKING

The Nottingham Amateur Video Festival will be held next year on Sunday May 10 at the Savoy cinema. The closing date for entries is March 31st, 1998, with a fee of £5 for every film you submit to organisers Nottingham Cine & Video Makers. The festival will run from 10am to 5pm, with food available all day and a bar open throughout. Entry forms are available from Robert Scotton, competition officer for NCVM, who can be reached on 0115 931 2386.

BIO-HAZARD ALERT!

Vulcan's next game to be released will be the 3D first person-perspective blaster *Genetic Species*. With lightsourced graphics (your weapons light up corridors as you fire down them) and some amazing weapons like the Taser, rocket launcher, drill and more, this game is looking great.

What's more, you'll be able to play a special demo of *Genetic Species* exclusive to *Amiga Format*, on next month's CD-ROM (*AFCD20*).

Genetic Species will be launched on 29th October this year and will cost £19.99 direct from Vulcan. You can visit their website at www.vulcan.co.uk for more details on this and other forthcoming games.

SOUNDS GOOD

Blittersoft have just announced that they will now be the exclusive UK distributors for the Format Gold-rated Prelude 16-bit soundcard reviewed in our last issue.

You can contact Blittersoft on 01908 261466 or visit their website at: www.blittersoft.com

Vulcan chooses a hard target



In their quest to push the Amiga even further past previously -believed limits, Vulcan have announced that they intend to create a "*Virtua Cop*" clone, called *Hard Target*, for the Amiga. It combines fully-animated 3D cut scenes with static gunplay areas where the bad guys pop up, around and down from their hiding places. The game looks set for a new year release and is at an early stage of development at the moment, however, as the screenshots show – the game's potential is definitely there. Like most of Vulcan's current games, it will require at least a moderately upgraded AGA Amiga with a 4x CD-ROM drive, 8Mb of Fast RAM and, Vulcan say, reflexes to match.





Although there isn't much about *Hard Target* on it at the moment, you can visit Vulcan's extensive website at:
http://www.vulcan.co.uk
or call Vulcan Software on 01705 670269 for further details on this and other forthcoming releases.

Steady your gun-toting arm and get your trigger at the ready. *Hard Target* is in Vulcan's prolific pipeline.

Imagine this

GOC Publishing have developed *ImaginEX* for all Imagine users – a fully-compatible, integrated add-on that performs a whole range of time-saving features. Among these are the new Scroller gadget, which enables you to zip through groups, objects and faces a lot faster, pixel burner presets which are capable of rendering at greater speeds than standard models and new printer templates for optimum rendering of your printer's DPI. *ImagineEX* retails at £24.99, but will be sold at the specially reduced price of £15.99 to their first 200 customers. It can only be obtained direct from GOC Publishing, at 71 Helmsley Rd, Willerby Rd, Hull, HU5 5ED, enclosing a cheque or postal order.



Save twiddling those thumbs with this new *Imagine* add-on.

MIDICRAFT sounds

MIDICRAFT are pitching their new *MIDINET* CD-ROM as "the best ISO 9660 MIDI-orientated CD-ROM ever produced". The compilation boasts 12000 MIDI scores configured for GM, GS, XG and the AWE32 and includes original work by the likes of Bjorn Lynne, Allister Brimble, Rob Hubbard, The Craft Brothers and Asif Ali. Converters, synth editors, librarians, synth voices, SYSEX dumps and tutorials all feature on the disc, which is compatible on all computer platforms and retails at £19.99 plus £1 p&p. You can also pick up MIDIcraft's *Drop In The Ocean* CD for an extra £2 if you buy it at the same time, which combines electronic sampling with a myriad of musical styles, from soca and reggae, to folk rock, soul and pop. For further information contact Kevan R. Craft on 01928 563762 or email him at craftbro@midicraft.demon.co.uk

Net Corner

BAD HAIR DAY

Leading hair expert Trevor Sorbie has put up a Web site with a difference. His virtual salon at http://www.trevorsorbie.com includes an online clinic for all you hair paranoiacs out there who lose sleep over whether to crimp or not to crimp. Email him your hair-related problems to mull over and he'll send you back a personal reply.

EVIL BERT

Sesame Street is, in most normal sane people's minds, a happy, safe place to visit. Unless your name happens to be Dino Ignacio, a young web designer who has uncovered evidence that proves that one of the shows most enduring characters and Ernie's partner and live in buddy Bert is actually a paragon of evil. See how Bert was involved in the Kennedy assassination and is responsible for trying to pervert most of the muppets in the Children's Television Workshop.
http://fractalcow.com/bert/bert.htm



FLAME ON!

We've mentioned it here before, but it stands a bit more publicity. Philip Cosby's Amiga Flame site is dedicated to Amiga gamers all over the world as Philip gathers new information, pictures and demos of new games coming out, either in shareware or through commercial sources. His site is constantly updated with news and tables of forthcoming games, and while it isn't always very well spelt, it's an invaluable website.
http://www.geocities.com/TimesSquare/Arcade/6437/index.html

DIDDY DAVE

Our favourite PD selector Dave Cusick has his own web page devoted to collecting humour, Amiga-related gubbins like his writing and PD software he has collected. It's a nicely laid out site with plenty of info:
http://www.dcus.demon.co.uk





Those Issue 100 Competition winners in full!

It was the biggest set of competitions *Amiga Format* has ever offered its readers and the entries flooded in. Now we can reveal just who the winners were...

Weird Science Ltd

The ten lucky winners of *Network PC* are:

R. Quinney, Colchester
J. Holroyd, Sheffield
P. Hood, Eltham
J. Pritchard, Stourbridge
S. Hawthorne, Devon
C. Pearce, Norfolk
J. Webster, Sheffield
J. Goscomb, Somerset
R. Brooke, Rochester
M. Hird, Sheffield

Golden Image

Each of these people can expect a mouse in the post:

S. Anslow, Stanmore
B. Hughes, Blackwood
J. Hills, London
S. Hobson, Rotherham
D. Wheeler, Worksop
R. Fitzpatrick, Nelson
K. Roebuck, Anglesey
J. Bryant, Birmingham
J. Hawkins, Gwent
J. Griffiths, York
M. Lyon, Norwich
M. Fletcher, Leicester
B. Platford, Angus
J. Johnson, Walney Island
D. Kirby, S. Ruislip
A. Faulkner, Withney
A. Popotto, LOndon
M. Johnston, Doncaster
C. Wignall, Appleby
B. Simpson, Brierly Hill
M. Saunders, Godshill
A. Denham, Bristol
A. Seaward, Newbury
K. Loc, Crawley
L. Thake, Farnham
L. Corws, St. Helens
D. Stone, Southwell
I. Holloway, Halifax
S. Hilton, Swansea
A. Blackhurst, Hawes
S. Whitaker, Leeds
J. Coupe, Sudbury
C. Hanretty, Erskine
C. Marshall, Leeds
J. Rudge, Sutton Coldfield
M. Gray, Plymouth
J. Leaf, Bridgeport
P. Shallcross, St. Lenards-On-Sea
P. Binstead, Southampton
J. Day, Tyne & Wear
R. Gullans, New York
J. Hillage, Coventry
K. Heslip, Dublin
C. Huber, Germany
M. Tarvilli, Italy
G. Smith, Tavistock
L. Martin, Bristol
S. Cott, Ryde
R. Rocha, Portugal
C. Anastassius, Budapest
S. Taylor, Aberdeen
D. Slane, USA
A. Pinheiro, Portugal
D. Plunkett, Swindon
M. Blank, London
M. Grant, Beverley
I. Elsom, Telford
B. Hurk, Bakersfield
J. Spriney, New Zealand
D. Symonds, Kirky-In-Ashfield
L. Argyros, Greece
S. Moorehouse, Blackburn
P. Maxwell, Cornwall
R. J. Reyes, Canary Islands
R. A. Marples, Apsley
C. Jones, Sheffield
C. Saeden, St. Anstell
N. Gregory, Stockport
S. Bellamy, Wrexham
S. Hazelwood, Morecambe
P. Needlam, Sheffield
S. Colton, Birmingham
I. Tarplee, Hasting
A. Connolly, St. Helens
T. Duchenne, Holland

Amiga International

We have two winners for the A1200HDs kindly supplied by uncle Petro:

Mr D. Price, Isle Of Wight
Paul England, Kianga, Australia

Cloanto Italia

These five people have each won a copy of *Personal Paint v7.1.*

P. J. Baver, Brighton
C. Thompson, Sheffield
Fabio Rapon, Italy
J. G. Howard, W. Yorkshire
R. J. Watson, Kent

clickBOOM!

These people have all won a copy of *Myst*, as soon as it comes out and clickBOOM have doubled the number of runners up who will each receive a copy of *Capital Punishment*:

M. Giblin, Sheffield
G. Severn, Derby
J. Lockhart, N. Ireland
A. Chandler, Oxon
J. Vranken, Belguim

Runners Up:

Rene Soria, Mexico
A. Benson, London
P. Payne, Dorset
J. Dolanec, Slovenia
D. Wallace, London
M. A. Sampson, Cornwell
D. Anderson, Denmark
S. Tse, E. Sussex
M. Phillips, Leicester
M. Hodgson, Southampton

Schatztruhe

Each of these winners will receive all five *Aminet Sets*, the runners up will all get the latest *Aminet* CD:

B. Antonsen, Norway
T. Nunds, Portugal
K. Saunders, Coventry
J. Gray, London
N. Nielson, Denmark

Runners Up:

S. Morgan, Northumberland
A. Whitlam, Germany
B. M. Hadfield, Tameside
J. Rorland, Sweden
B. Nisbet, E. Kilbridge
D. Kewley, Surrey
A. Pinheiro, Bath
B. Broc, France
P. Bain, S. Wales
L. Argyros, Greece

Canon

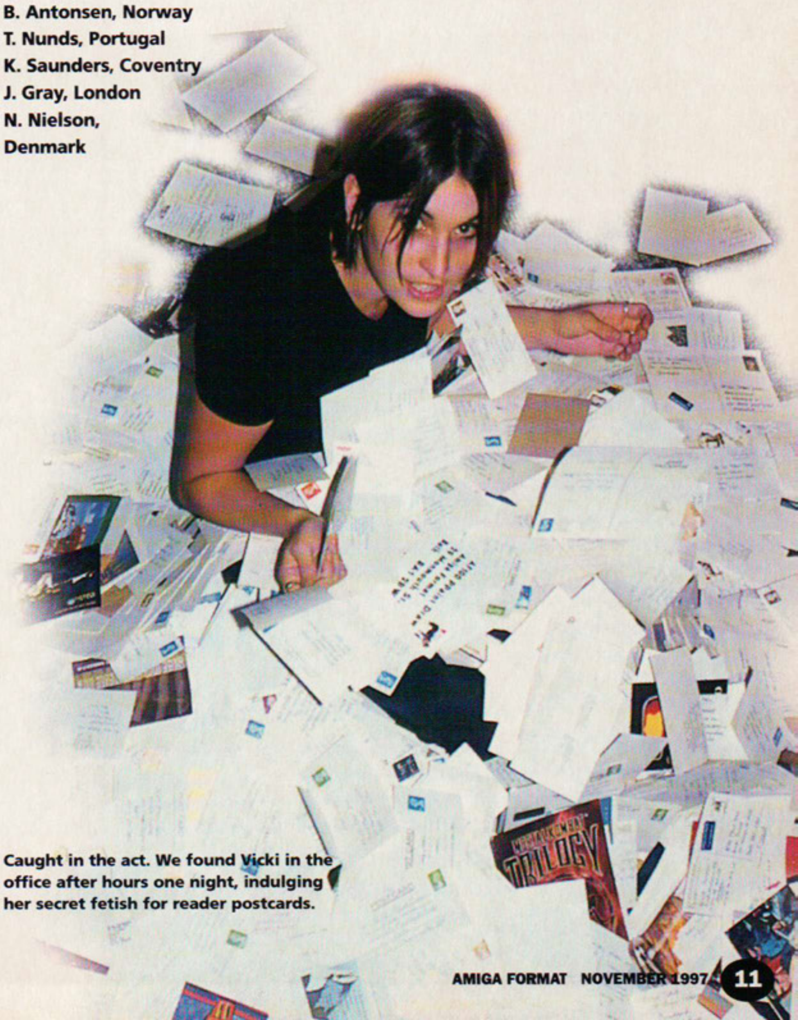
These winners will both receive one of Canon's excellent BJC-240 colour bubblejets:

A. Raynor, Dorset
Adrian Squirrell, London

HiQ Ltd.

This lucky guy will be getting a Siamese in the post shortly:

Mr I. A. Fisher, Carlisle



Caught in the act. We found Vicki in the office after hours one night, indulging her secret fetish for reader postcards.

Sadeness

Generous ole Sadeness gave us ten copies each of *The Hidden Truth* and *AGA Experience 3*. These are the people that'll get them:

Simon Finnigan, Liverpool
Victoria Tuczak, Birmingham
E.B. Stretton, Lincs
Mark Ball, Devon
Vernon De'ath, Bucks
Andy Till, Dorset
A. Prime, Kent
Robin Don, Cornwall
Dennis Edwards, Leeds
Carolyne Cumbley, Lancs

Wizard Developments:

A whole set of prizes from Wizard with the winner of the Magnum '040 being:

Mrs. E. Dorman, Argyle

Second prize (DOpus Magellan):

K. McNulty, East Sussex

Runners Up (Mice):

Stewart Woodward, Southampton
Christopher Clarke, Hull
P. Moon, Dorset
Mrs. J. Fernly, Isle of Wight

Gasteiner:

Gasteiner are going to be sending a Microvitec M1438 to:

John Payne, London

Power Computing

The lucky chap that's going to receive the Viper Mk.V and CD-ROM drive is:

Mr. J. Ashton, Peterborough

Active Software

Here are the winners of 10 copies of *Net Connect*:

Pieter van Houte, Kuitaart, The Netherlands
Roger Winter, Basingstoke
Lorraine Argyros, Corfu, Greece
Mark Dunbavan, Cumbria
Andrew Dean, Romford, Essex
Mr L Corns, St. Helens
Richard Henderson, Tipton
Matthew Connor, Co. Down
Mr O.C. Masters, Stourbridge
Mrs J. Prime, Sittingbourne

While these 10 lucky chaps all won a copy of *Voyager*:

Mr D. Fraser, South Woodham Ferrers
Sven Harrey, Smethwick
Stephen Pulis, Birkirkara, Malta
Ian Grant, Sheffield
James Merrilees, Glasgow
Mr A. F. Blount, Hinckley
Carl Johan Marckmann, Kbh. SV., Denmark
Alessandro Lumaca, Lerici, Italy
Robert Fairley, Dunblane
S. Anslow, Stanmore

LH Publishing

These five people are going to be busy creating works of art with their copies of *DrawStudio:*

Mr. K.A. Valentine, Helston
Jamie Winter, Waterlooville
Miss K. Fairchild, Crediton
Roger Woolgrove, Northants.
Trevor Bridge, Cronulla, NSW Australia

Epic

There were 10 lucky winners of new *Doom* clone, *Testament* and they were:

Matthew Fletcher, Leicester
M. Simpson, Ipswich
Duncan Gow, Helensburgh
Wendy Augustine, Harrow
Garry Childs, Colchester
B. Ashdown, Walton On Thames
Gordan A. Black, Glasgow
Graham Todd, Troon
Mr. C. P. Brown, Liverpool
J. Hayes, Liverpool

There were also 10 lucky winners of the second Epic compo. These people all received a a copy of Epic's *Encyclopedia 97* and their *Encyclopedia of the Paranormal*.

John Francis, Bognor Regis
Gordan Johnson, Coventry
Robin Maddock, Plymouth
Mike Patrick, Coventry
Mick Foster, Blackpool
A. J. Butcher, New Milton
Mike Gray, Plymouth
G. Starke, Leeds
L. Corns, St. Helens
Mr. Bayman, R.A.F Akrotiri

Blittersoft

Blittersoft had three copies of the new *Art Effect 2* to give away, the winners are as follows:

Scot Hughes, Liverpool
James Milner, Northants
M Carrier, Sittingbourne

Digita International

Digita gave us five pressie bags to give away each containing the very latest version of *Wordworth Office* on CD and a bunch of other Digita goodies. These are the winners:

J. Rudge, West Midlands
E. F. Stallard, Hampshire
D. J. Halliday, Suffolk
G. Walker, East Sussex
A. J. Russell, Scotland

BRITAIN'S BIGGEST MUSIC SHOW

national music show 97 INCORPORATING MEMS

It's now only a matter of weeks before the doors are flung open at the year's biggest public music show. The National Music Show, which takes place at London's Wembley Exhibition Centre, kicks off on Friday 28th November and runs throughout a weekend packed with features, live performances, competitions, interviews, presentations and competitions. For anyone who plays music or wants to, it's an essential date for your diary.

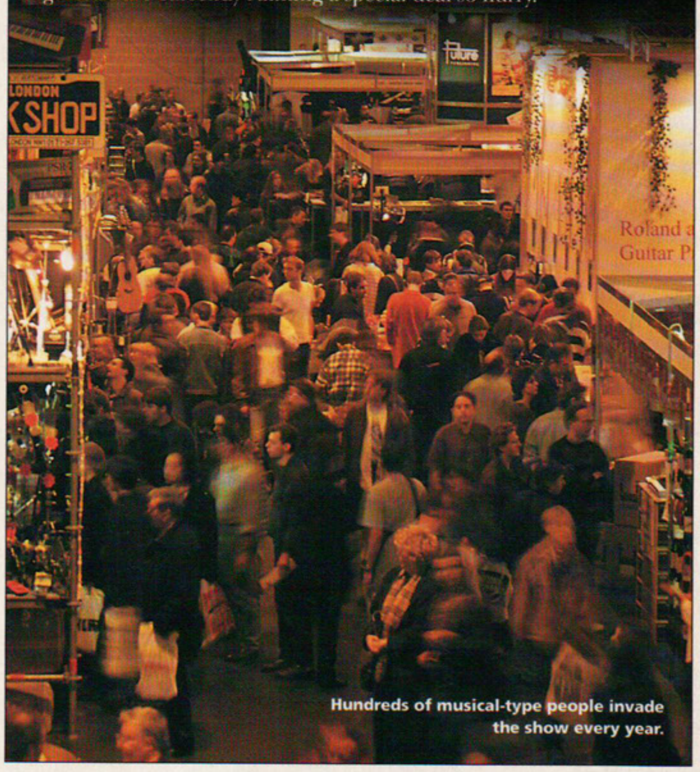


In keeping with our musical theme this month, why not visit the National Music Show?

Features so far announced include a Beatles Exhibition, to commemorate the 30th Anniversary of the Sergeant Pepper's album. As always, there'll be a whole host of live performances, including appearances by the Yardbirds, the Animals and Dr Feelgood, as well as many other acts yet to be announced.

A brand new attraction at the Show will be a packed timetable of seminars, tutorials, demonstrations and discussions, featuring the Editors of our sister magazines *Guitarist*, *Total Guitar* and *Future Music*. They'll be live on stage, and you'll also get the opportunity to meet them afterwards – and buy them a pint, if the fancy takes you!

The Live Music Hall will have a packed schedule of live performances on each of the Show's three days, which will include the finals of both the Guitarist of the Year and the Band of the Year. For more information call the ticket hotline on 01369 708007. Tickets normally cost £6 in advance for adults (just £2.50 for children), but the organisers are currently running a special deal so hurry.



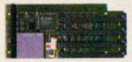
Hundreds of musical-type people invade the show every year.

CyberStorm PPC-604	150 MHz	180 MHz	200 MHz
Companion CPU Socket	040 or 060	040 or 060	040 or 060
MIPS			350
SpecFP95			7.1
Max RAM	128Mb	128Mb	128Mb
SIMM Sockets	4	4	4
SCSI On-board	Ultra-Wide	Ultra-Wide	Ultra-Wide
Price	£479.95	£579.95	£679.95
Price with 68040/25 fitted	£549.95	£649.95	£749.95
Price with 68040/40 fitted	£579.95	£699.95	£779.95
Price with 68060 fitted	£729.95	£829.95	£929.95
Registered Upgrade Price	£449.95	£529.95	£599.95

POWER UP
AMIGA™ GOES POWER PC™

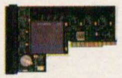
Blizzard 603/603+	175 MHz	200 MHz
Companion CPU Socket	030	040 or 060
MIPS	250	280
SpecFP95	3.1	3.5
Max RAM	64Mb	64Mb
SIMM Sockets	1	1
SCSI On-board	SCSI-II	SCSI-II
Price	£299.95	£379.95
Price with 68030/50 fitted	£369.95	
Price with 68040/25 fitted		£449.95
Price with 68040/50 fitted		£479.95
Price with 68060 fitted		£629.95
Registered Upgrade Price		£599.95

BLIZZARD CYBERSTORM PPC BLIZZARD



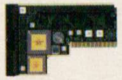
Cyberstorm MKII 60/50
A3/4000 accelerator £399.95

Cyberstorm MKII 40/40
A3/4000 accelerator £249.95



Blizzard 1260 50MHz
A1200 accelerator £329.95

Blizzard 1240 40MHz
A1200 accelerator £199.95



Blizzard 1230 50MHz
A1200 accelerator £ 94.95

Add **SCSI-II** to the above accelerators for £ 64.95



£249.95

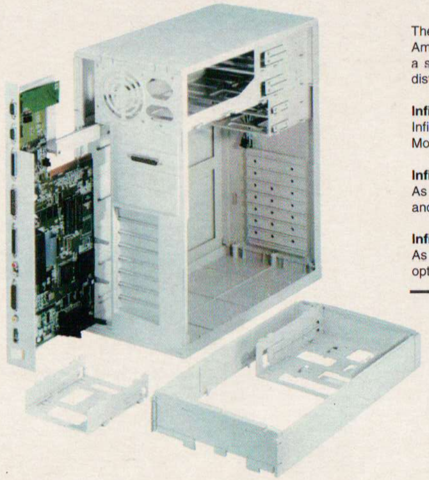
"The God of Amiga graphics cards"
Cu Amiga

- "Future-proof" modular design!
- Integrated flicker fixer - Use cheap SVGA monitors!
- 4Mb super fast EDO RAM as standard!
- Autosense Zorro II or Zorro III
- Huge 1600x1200 16-bit resolution!
- Large 1280 x 1024 24-bit resolution!
- On-board Audio switching (CD-ROM, Amiga, External)
- 16-bit add-on Sound Module in development!
- Pablo II add-on Video Module in development!
- 3D GFX add-on Module in development!
- MPEG Module in development!
- PowerPC Module planned!
- Supplied with the excellent Picasso96 RTG software.

Infinitiv *Amiga* Computers

Fully Licensed New Amiga's

powered by AMIGA



The new Micronik Infinitiv Tower Sytems are the very first officially licensed Amiga system to become available in the UK. The Infinitiv Tower system is a stylish, expandable and easy to use system. Blittersoft are exclusively distributing three new models, and we can offer various enhancements.

Infinitiv 1300
Infinitiv Tower, Motherboard, OS3.1, 200W PSU, Mouse, External Amiga Keyboard, Floppy drive. £349.95

Infinitiv 1400
As per 1300 above plus 5 x Zorro II, 2 x ISA, 2 x PCI and VIdeo option. £469.95

Infinitiv 1500
As per 1300 above plus 5 x Zorro III, 1 x ISA, 2 x PCI, Video option, A4000 CPU slot, SCSI-II interface and 1 x SIMM slot. £599.95

Add-ons and Accessories

We can also offer additional upgrades and peripherals at reduced costs when purchased with a complete system. We are working on special packs offering additional Hard drives (fitted and Workbench installed), Full Internet solution (33.6 Modem and NetConnect), Monitors, CD-ROM's, Picasso IV graphics board, Mac and PC emulation, Memory, 68xxx and PPC Accelerators etc.

Fusion - Mac Emulation



Fusion is the ultimate software only Mac emulation for ANY Amiga with 68020 or better CPU. Moving on from the Mac emulators of the past, it boasts such advanced features as Virtual memory, on-the-fly screen resolution changing and incredibly fast video (Direct Graphics board Picasso96 and CyberGraphX and Amiga Video). The most technical feature of FUSION is its ICP (Inter-Communications Port). There is a a virtual link between the Amiga and the Macintosh while the emulation is running. This link allows any programmer to access any function normally available to Mac programmers and to mount ALL Macintosh volumes on the Amiga side. The devices become AmigaDOS compatible, so you can use your favourite file copying tool (i.e. DirectoryOpus) to copy, delete, rename, etc. files on any Macintosh partition, and all from the Amiga side. The feature list of Fusion is too large to detail, so please call if you require further information.

PCx - PC x86 Emulation



PCx is a software only x86 emulation for any 68020+ Amiga. With features such as CPU Transcription, CD-ROM and ASPI drivers, VGA/SVGA graphics, Soundblaster support, video card support, Graffiti support etc..... PCx is the most advanced software PC emulator available for the Amiga! Please call if you require further details.



PMPro is the ultimate award winning GFX-Tool for your Amiga

Picture Cataloguer offers automatic GFX-Format conversion, scanning, printing, image processing, PhotoCD access and more!

The PMPro is designed as a universal graphics tool for administration, processing, scanning, printing and conversion of bitmapped graphics and IFF animations. Since the graphics or animations are displayed as miniaturised thumbnails on the screen, the user gains a complete overview over all graphics files on his hard disks, CD-ROMs, etc. and can directly access these via mouse clicks and may also export these directly to any other program like DPaint, PPaint, AdPro and so on. Integrated 24 Bit image processing functionality and intelligent image conversion into other file formats complete the package. Requires OS 2.1 or higher, HardDisk and min. 3Mb FastRam.

£49.95

VARIOUS AMIGA ITEMS

Picasso II+	£139.95
Pablo Video Encoder	£ 49.95
Ariadne	£129.95
Liana 1.6m cable	£ 39.95
Liana 5.0m cable	£ 49.95
MainActor Pro	£ 44.95
MainActor Broadcast	£ 99.95
CatWeasel 1200 (PC HD floppy Drive controller)	£ 54.95
CatWeasel 4000 Version	£ 54.95
CatWeasel Zorro + 3 x Buffered IDE interfaces	£ 69.95
IDEFix Buffered 1200 interface with reg. IDE-Fix s/w	£ 34.95
Monitor Adaptor (23-pin monitor to 15-pin gfx card)	£ 14.95
VGA Adaptor (23-pin Amiga to 15-pin monitor)	£ 14.95
Image Vision Multi-Media Authoring	£ 29.95
Graffiti Chunky Graphics adaptor	£ 44.95
Burn-It CD Writing Software - TAO	£ 59.95
Burn-It CD Writing Software - DAO	£ 79.95
Genlock M10	£169.95
Genlock M25	£229.95
Floppy Drive 1.76Mb int. (1200 or 4000 1" high)	£ 54.95
Floppy Drive 1.76Mb Ext. (No software patch!)	£ 59.95
OS3.1 500/2000 Kit (ROMs/Disks/Manuals)	£ 39.95
OS3.1 1200/3000/4000 Kit (ROMs/Disks/Manuals)	£ 45.95
OS3.1 500/2000 ROMs	£ 59.95
OS3.1 1200/3000/4000 ROMs	£ 59.95
Please state Amiga model when ordering!	
8 Mb 72-pin SIMM RAM	£ 29.95
16Mb 72-pin SIMM RAM	£ 54.95
32Mb 72-pin SIMM RAM	£ 99.95

HAAGE & PARTNER — AMIGA STORM C — AMIGA STORM WIZARD — AMIGA art effect



- Powerful Art program with "plug-in"support and classic interface.
- Supports all major Graphics cards.
- New version 2 with layers and VMem.
- Call for further details.

ArtEffect 1.5 £ 59.95
ArtEffect 2.0 £119.95

Power Effects (many new imafe effects) £29.95
SuperView (Adds PhotoCD and 30+ loaders) £29.95

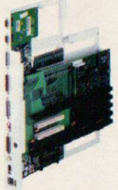
- Highly developed C environment
- Veru user friendly design
- Add-on modules for PPC and p-OS
- Even more powerful V2
- Non-Commercial version available.

Storm C v2.0 Pro £179.95
Storm C v2.0 Pro Non Com. £119.95

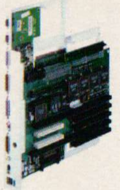
- GUI creator
- Compliments Storm C

Storm Wizard 2.0 £ 69.95

Infinitiv *Expansion* Towers and Parts



Zorro II x 5, ISA x 2 **Z1-i**
PCI x 2, Video (Option)



Zorro III x 5, ISA x 2 **Z3-i**
PCI x 2, Video (Option), SCSI-II, A4000 CPU slot.

Tower Kits for the A3000 and A4000
Our up Towers provide :

High Quality Metal CE Approved Tower
Zorro III slots x 7
ISA slots x 5 (6 for 3000)
Video x 2 (1 for 3000)
PCI version has 3 x PCI and 3 x ISA
They also vastly increase the expansion capabilities for new peripherals.

Tower 4000 PCI System	**£329.95**
Tower 4000 ISA System	**£299.95**
Tower 3000 ISA System	**£329.95**
Uprated PSU	**£ 69.95**
Zorro III/ISA/PCI/Vid (A4000)	**£219.95**
Zorro III/ISA/Video (A4000)	**£179.95**
Zorro III/ISA/Video (A3000)	**£219.95**

Features of the Infinitiv Tower Solutions

- Custom design, simple "slide-in" motherboard cradle.
- Choice of Zorro II or Zorro III expansion boards.
- All boards have PCI, ISA and optional video slots.
- Built-in PC keyboard interface.
- Optional external Amiga Keyboard case (houses A1200 Keyboard)
- Neat, easy connection - No messy wires!
- Pass-through CPU for accelerator boards.
- PCMCIA accessible via optional adaptor.
- Various add-on components to enhance your system further

Infinitiv Kit-Z2
Tower, Z1-i Zorro board plus PSU £299.95
Infinitiv Kit-Z3
Tower, Z3-i Zorro board plus PSU £469.95

Component Parts

Infinitiv Tower + Keyboard interface	£119.95
Infinitiv Tower + K/B int. + PSU	£159.95
Z1-i Zorro II x 5, PCI x 2, ISA x 2, Video (option)	£149.95
Z3-i Zorro III x 5, PCI x 2, ISA x 2, Video (option), SCSI-II, A4000 CPU slot	£319.95
Infinitiv uprated PSU	£ 44.95
Infinitiv 3.5" "Snap-on" bay	£ 11.95
Infinitive 5.25" "Snap-on" bay	£ 29.95
PCMCIA Adaptor	£ 29.95
Infinitiv Video Slot Interface	£ 39.95
Power Adaptor	£ 6.95
External A1200 Keyboard case	£ 39.95
Windows 95 Keyboard	£ 19.95
Audio Slot Bezel (2 x Phono)	£ 19.95
4-Way IDE interface	£ 19.95
1.76Mb Floppy drive (internal)	£ 54.95
CD-ROM Bezel	£ 4.95
Twin Internal floppy drive cable	£ 24.95
3.5" device adaptor (Mounts in 5.25" bay)	£ 14.95

NeMac IV - Directors Cut Exclusive UK distributors!!!



15 minutes of beautifully rendered 3D intro and between level animation. 400Mb data on the CD, 40 levels of shooting mayhem! Any Amiga with hard drive and 68020 or better. OCS/ECS/AGA, Picasso96, Graffiti or CyberGraphX Runs in any Amiga screenmode OS friendly (multi-tasking and quitting).Joystick, mouse, joypad, redefinable keys support. **£24.95**

AWeb

AWeb-II
The latest **V3**!! Now with many new features including Frames etc.
New Lower Price! **£29.95**

Blittersoft

6 Drakes Mews, Crownhill Industry, Milton Keynes. MK8 OER. UK.

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Order by Access/Visa/Delta/Switch/P. Order/Cheque. 2% Surcharge on Access/Visa (not debit cards). All prices fully inclusive of VAT. Postage and Packing £7.00 + VAT (24 Hour) and £15.00 + VAT (Saturday). Prices and specifications may change without notice. Please telephone to confirm pricing/specification/ availability before ordering. E&OE. All trademarks acknowledged. All orders subject to our terms and conditions of trading, available on request. Trade enquiries welcome.

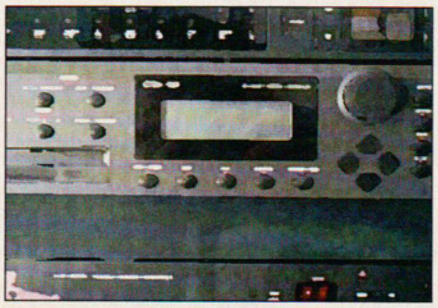
You and your Amiga could soon be writing Top 10 hits together. John Kennedy finds out how it's done and Ben Vost meets the men who've made it...



When the Amiga first appeared in the eighties, it could do something incredible: play back real sounds. With four individual sound channels, the Amiga could play music, add sound effects to games and even talk with a speech synthesiser. Computers and music met, and could never be separated again.

It wasn't long before two things happened: sound sampling peripheral meant that anyone with an Amiga could capture their own sounds, and secondly Tracker programs meant anyone with an Amiga could write their own tunes.

There had never been anything quite like Tracker programs. They exploited the Amiga's four sound channels to provide a simple, step-by-step music sequencer. As the tracks scrolled up the screen, sound samples were triggered at different replay rates. The result, when programmed properly, was music. Tracks were organised into blocks, and blocks into songs. The whole lot (tracks, blocks, songs and samples) were saved in one file, called a "Mod" or "Module".

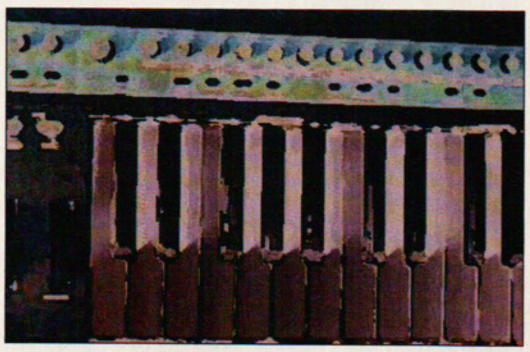


Thousands of Mod files, created on the Amiga, are loaded up to Aminet every week.

Dozens of Tracker programs were written, and dozens of stand-alone Mod players appeared too. The talent of musical Amiga users grew and grew, and it was soon almost mandatory to have a Mod player on your Workbench, replaying the current Mod Top Ten as you worked.

> **"Tracker programs meant anyone with an Amiga could write their own tunes."**

From an obscure tool used by game and demo programmers to create soundtracks, Mod programming was something anyone could attempt. Although the results were sometimes awful, the number of high quality tunes made up for the dross. The number of Mod files written stretches into the tens of thousands. Original compositions, and versions of popular tunes: no-one would have time to listen to them all. To this day, Aminet regularly receives new Mod files by the truckload.



Keyboards are available with or without sound generating features...

GENERAL MIDI

When MIDI first appeared, there was no logical link between voices and the program number used to select them. A piano sound on one sound module might have been a flugelhorn on another instrument. This meant that any music composed for playback on one system was not guaranteed to work on another.

The General MIDI standard proposed by manufacturers Roland changed all that. Now there was a recognised standard. To attain GM standard, certain instruments had to be present. The number of voices which could be played at once (polyphony) was set, as was the provision of effects such as reverb and chorus. As a result, song files saved in General MIDI format could be replayed on any compatible instrument, and the end result would be broadly similar.

MAKING MUSIC WITH.. INTERNAL SOUNDS

It's possible to use the Amiga to compose tunes with no extra hardware at all, and the key is the Tracker program. There are plenty of excellent Tracker applications available, from the free *ProTracker* to the commercial *OctaMED*. *OctaMED* manages to play up to eight samples at once, although at reduced quality. *SoundStudio* is the latest incarnation of the Tracker program, and with a fast Amiga it is capable of excellent results.

Some noise!



Obtaining the raw sounds to use in your work is no problem either, as the public domain is stuffed with disks of suitable samples. All you have to do is load them into the Tracker program and away you go. If you want a specific sound, you can buy a sound sampling module. These are inexpensive, and attach to the parallel port. They capture sounds and save them as IFF files. They can be edited if necessary, and loaded into the Tracker program.

When you want to go beyond the hardware limitations of the Amiga's sound output, there are various routes you can take. One of the simplest is to get another Amiga, instantly doubling your sound generating facilities. It's possible to synchronise two or more Amigas as they play, so all you need to do is spread the tracks between Tracker programs running on each system.

Perhaps the biggest problem with Tracker programs is that notes need to be entered using the keyboard. In real time mode, you hammer the keys and play your tune. If you prefer, you can enter the notes one at a time: this allows fine-control over the volume of the note, and also makes it possible to create special effects such as slides or echoes.



...Obviously the ones which make noises are more expensive.

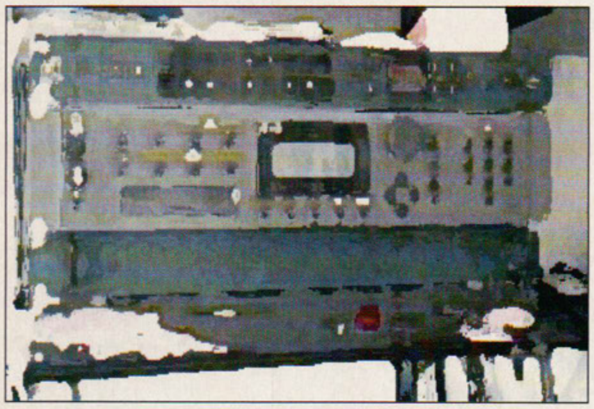
The volume issue can be solved using an external music keyboard. This can be connected to the Amiga, and used to enter notes instead of the ASCII keyboard. As the music keyboard can detect how hard the keys have been pressed, it's possible to record tunes more quickly and accurately.

Connecting a keyboard is easy because of MIDI: the standard protocol for connecting music instruments to each other and to computers.

Continued overleaf ➡

MAKING MUSIC WITH... MIDI

MIDI is a surprisingly old format, first appearing in the 80s. It's now a ubiquitous part of electronic music, and no new instrument lacks the trademark 5-pin DIN sockets. MIDI allows note information to be transmitted and received. The sounds themselves aren't despatched along the MIDI cables, rather a description of the note and its volume.



MIDI kit is available in all forms...

Today's electronic musical instruments can broadly be described as synthesisers. From keyboards with built-in sound generators, to stand-alone sound modules, drum machines, effects boxes and samplers, there is a huge range of hardware to spend your money on. Musical instruments are now so popular, that manufacturers are even producing instruments aimed at different styles: for example, a Dance music module containing techno-style riffs and percussion.

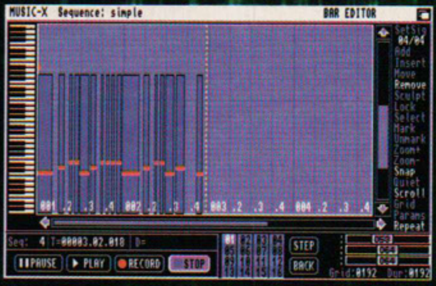
There are also plenty of more generic sound modules, capable of playing everything from a piano, bass guitar and latin drum kits. They normally offer a set of "voices", and the ability to simultaneously play several notes using the same voice or multiple voices. It's common to be able to have up to 32 individual sounds occurring at the same time.

The Amiga can receive and transmit MIDI information when fitted with an inexpensive interface, which connects to the serial port. It's up to software to control which notes are played and when. Although a tracker program such as OctaMED can deal with MIDI, it's advisable to use a more flexible music sequencing program. Applications such as "*MusicX*" and "*Bars and Pipes*" are long in the tooth, but still

Breakbeat techno in 10 easy steps

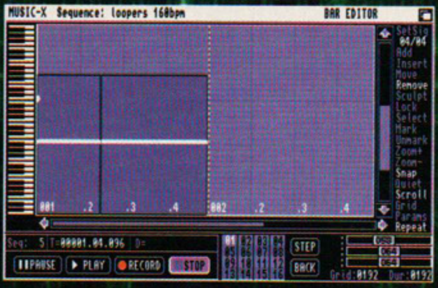
If you're writing and recording dance music of any type using *Music-X*, then the techniques involved are going to be fairly similar. In this case, I've written a track that features elements of both Drum & Bass and Techno, though if Hip-hop or Garage are what you're into, use a similar approach – just turn the tempo way down and use *Music-X*'s swing beat processor.

1 A lot of the time when I'm playing about with *Music-X*, I start off by laying down a few percussion tracks. In this case I programmed about three or four different Drum & Bass style rhythms, playing back on both my TG300 sound module and triggering individual drum sounds on my S2000 sampler.



This is the simple Drum & Bass percussion played on the TG300.

2 I like to layer programmed percussion with sampled breakbeats. I started out first by adding a whole two bars worth of the breakbeat, with no retriggering. This let me decide which note was the closest to sync-ing the sample with the tempo of the track (in the first instance 160bpm). I adjusted the sample playback rate further using a pitchbend. Once I was happy that the sample was triggering accurately within the tempo framework, I added a second note, re-triggering the sample on the fourth note of the bar. I also prepared a 140bpm version of the same loop.



The main breakbeat sample, pitch-shifted for timing accuracy.

3 I'd had a few ideas for background chords kicking around in my head, and had a go at laying these down. The chords (actually just pairs of notes separated by a couple of octaves) were my third or fourth attempt at getting what I wanted.



The main background chords.

4 To get some idea of what I wanted next from the track, I put some repeat markers in the tracks I had so far, and set them all playing. I fairly quickly came up with both the syncopated guitar-style bass and the sine wave bass used later on in the track.

5 After I had the basslines sorted, I decided I wanted something higher up to offset what was a fairly low-frequency affair so far. I used the same sound as for the initial bass, but set up three octaves, to come up with the off-beat pulses that feature fairly heavily in the track. I also noticed that I had a pizzicato string sound set up on MIDI channel 4, and was just messing around with this sound when I decided to record the pentatonic riff that appears in the track.

6 Although I recorded this track from a fairly rhythm-oriented viewpoint, quite often I record either the chords or hooklines for a track before the percussion. There is no "right" way of doing things – just lay down the tracks that come to mind first. You may even prefer to build up a library of percussion tracks rather than having to start from scratch each time – particularly if you favour four-beat style rhythms.



...from stand-alone sound generators, to dedicated Samplers.

offer all the facilities needed to produce stunning results. Modern programs are also starting to appear, with packages such as "*Camouflage*" offering sophisticated MIDI and sound sampling support in one.

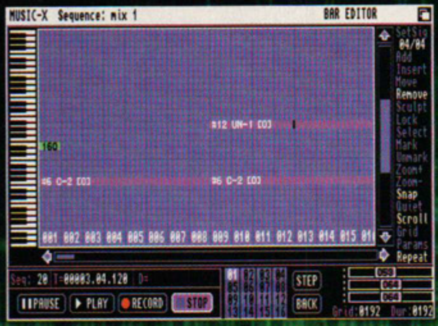
It's almost impossible to recommend what MIDI hardware you need to get started, as it depends so much on your budget and favourite style of music. You might be perfectly happy with a second-hand MIDI module, or you might want a huge set-up based on a keyboard synth, rack of modules and effects, dedicated sampler and a DAT machine. If you are interested in the magic which is MIDI, check out our sister title, *Future Music*, which rounds up new products and explains everything you nêed to know.

RECORDING MUSIC WITH... THE AMIGA

If you want to share your music with your friends, one way is to give them a copy of the song data. This is fine if they have an Amiga, and if necessary, the same MIDI hardware as yourself. Often though, you'll want to give them

Continued overleaf ➡

7 Once you have all the tracks you need recorded, the next thing to do is to try a test mix. I started off with just the rather dreary chords, and launched fairly quickly into a lot of percussion and the first bassline.



The mix starts with just the chords, and a tempo change.

After I'd got everything rolling along, I wasn't quite sure where I wanted to take the track, so I decided to drop everything I had so far and go straight to the second sine-wave bassline.



The mix builds sharply, though you can see the point in the track where it drops away to just the sine-wave bass.

8 I added some percussion and the hookline back in again, fairly promptly, but never one to be able to leave well enough alone, I decided to make use of the 140bpm breakbeat that I'd set up, and stuck in a rather long tempo change, with just the bass and pizzicato string sound playing. Once establishing at 140bpm, I threw a lot of percussion back into the mix. It's odd how slow 140bpm can seem in this context – it's a speed that seems almost too fast for, say, Garage.



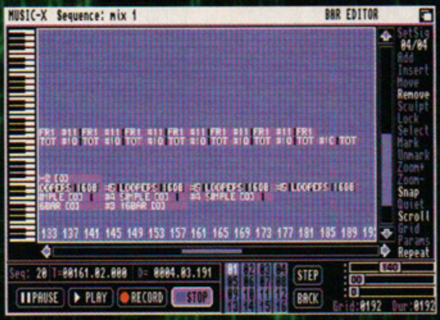
Once it gets going again, I've dropped the percussion, and taken a bar to cut the tempo to 140bpm.

9 After quite a short period at 140bpm, I dropped every track out and added in the chords again – this lack of rhythm covered another tempo change back up to 160bpm again.



Another fairly laidback tempo change, back to 160bpm, this time with only the chords, to mask the change.

10 Once everything was banging away again, I opted for a fairly conventional ending. Partly because, as this was only supposed to be a test mix of the track, I was growing bored with it, and partly because this sort of ending is perfect for mixing another track in at a later date.



Not a particularly challenging ending, but this can be handy if you're intending to mix the track later.

You can see that my particular method of recording a track is not particularly scientific in its approach – I prefer just to let my ears and (dubious) sense of rhythm lead the way a track. This particular track really needs some vocal samples or media samples to flesh it out, though I'm reasonably happy with the sound of this test mix.

something more convenient such as a cassette tape or a compact disc.

Recording the Amiga's sound to cassette is quite easy: all you need is a tape recorder with an AUX input to connect to the Amiga's audio output. Recording other instruments too requires a "mixer", a device which allows incoming audio to be combined into a single stereo sound and then recorder. Mixers cost from about £50 upwards, and the better ones will allow you to adjust the position of sounds in the stereo image (panning) and also to make EQ changes to boost bass or reduce hiss.

"Already there are AHI sound cards, and a growing number of utility programs."


Mixing all those stereo signals into one stereo pair for recording is hard work.

These days of course, we're all totally digital. It's now possible to burn your own audio CDs on the Amiga, using software such as MakeCD, from Angela Schmidt (available on Aminet), and MasterISO from Asimware (contact Blittersoft 01908261477). These packages can load an audio file and convert it into the format required for storing information on CD. When you play back the disc in your hi-fi, you'll be able to hear it as though it were an ordinary, professionally produced album. Capturing the sound in IFF format in the first place will require you to sample the entire project direct to disk, but SoundStudio allows direct CDDA file output.

If you think your tunes are particularly good, you might want to try and make some money out of them, either by trying a record label, or contacting a software house about soundtrack music. If you want to attempt this, make sure your recordings are of pristine quality. You must spend time polishing and polishing, making sure there are no rough edges. *Future Music* regularly puts reader's contributions on its Coverdisk – it's a very good way of seeing exactly what you are up against.

FUTURE OF AMIGA SOUND

The biggest limitation with Amiga audio is the hardware. Unlike the PC, it's not possible to remove the Amiga's sound chips and plug in a new card – they are an integral part of the Amiga hardware. To get around this problem, a standard called "AHI" has been introduced. (Simon Goodwin wrote a feature on AHI which appeared in *AF102*.) This allows programs wishing to make use of sound to address a special library, rather than making use of the hardware directly. Extra sound hardware can then be added to the system, and as long as AHI compatible drivers are available, the software will support it.

Already there are AHI sound cards, and a growing number of utility programs. Although there are a number of 16-bit sound systems for the Amiga, including the A1200, it's hoped that introducing a standard will help revitalise music making on the Amiga.


A large mixing desk becomes essential as your MIDI kit grows in number.

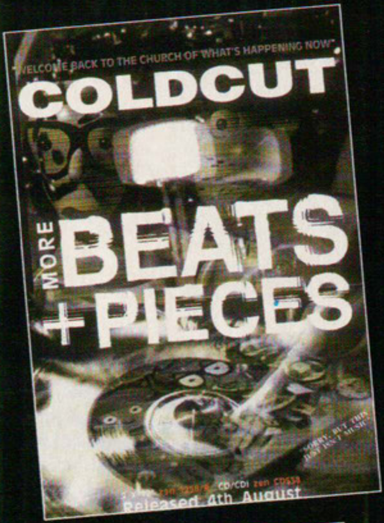
DIGITAL SOUNDS

The Amiga generates sounds by passing a digital version of a sound waveform through electronics known as a "Digital to Analogue Converter" or "DAC". The DAC is present in the Amiga's Custom Chipset, and it can play up to four waveforms at once.

Creating the data that makes up the waveforms can be done mathematically, or by capturing real sounds. Using the inverse of a DAC, an ADC, it's possible to take real sounds and convert them into the stream of digital values. This is exactly what a sound sampler does.

The Amiga stores its samples with an accuracy of 8-bits. By comparison, a CD player stores data using 16-bits. This means the CD player's output is generally of a higher quality. That doesn't mean the Amiga is poor – with care, the sounds generated from the Amiga are good enough for professional use.

Incidentally, as Audio CDs also store music in digital form, it's possible (with the right software and hardware) to read the data directly from a CD and store it in the Amiga's memory for editing or replay.

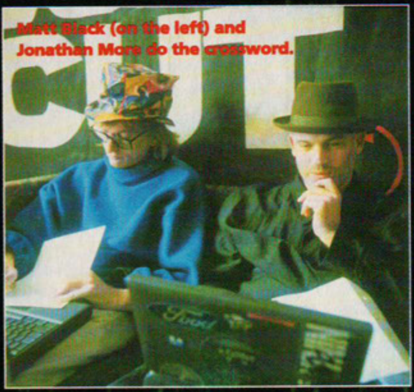







More Beats and Pieces is the tenth anniversary homage to Coldcut's original album.




Matt Black (on the left) and Jonathan More do the crossword.

An interview with Matt Black from Coldcut

Matt Black is one half of Coldcut – the influential band that really introduced the British public to sound sampling. They have been responsible behind the scenes for a number of top ten tunes and, best of all, they are computer junkies.

AF: How did you get into computing?

MB: Towards the end of the eighties, I came into some money and I'd heard of the Amiga, so I got myself a bit of a setup – an A2000, VIDI Amiga, Sculpt, Animate and so on, mainly to do the graphics for Coldcut. I carried on and progressed a bit further – I got DPaint and Turbo Silver, then later Imagine and those programs were brilliant – there still isn't an equivalent of DPaint for the PC or the Mac and the old PC DPaint didn't even come close...

AF: Yes, it didn't animate for a start...

MB: Right. Anyway, I'm not much of an artist but the Amiga allowed me to mess around. I found a program called Lissa – it makes Lissajous curves. It was like being a record collector and finding a rare US import, I got it from The States and when you use it with Imagine you get the most gorgeous results. Anyway, I started using the Amiga mainly for our videos. I would digitise stuff from KungFu movies and then draw over it in DPaint...

AF: Rotoscoping?

MB: Yeah, exactly. Then I got really into Imagine and Forge. What a program. The PCs kind of pinched that idea, making textures now, in 3D studio, but Forge was it. I loved playing around making textures, then putting them on Imagine objects. We actually got quite a lot of pictures printed in mags promoting Coldcut and we used some of them for our website, Pipe.

AF: What was it that attracted you to the Amiga?

MB: I've been interested in computing for ages. And the Amiga, okay, the startup-sequence and all that was a bit of a nightmare but it is on any machine, the thing was, it plugged straight into the TV. That's great. People are used to using TVs. That's why consoles are so much more popular in the home – they're cheap and they just plug in the TV and in the early days, that's all you had. But if you buy a Sega or whatever, you can't write your own software you just have to accept what's given to you. The Amiga's different. You could knock up your own games and then give them to your mates, whatever. We already have a universal entertainment standard – the TV. If people put a bit more effort into making TVs RGB compatible, etc. it would be much better than having to use all those fragile monitors. They're fine for the office, but you want to get a few mates around to see the TV. The other thing that always impressed me about the Amiga was the demo scene. Really those were some amazing guys pushing the machine to the limits.

> **"The other thing that always impressed me about the Amiga was the demo scene."**

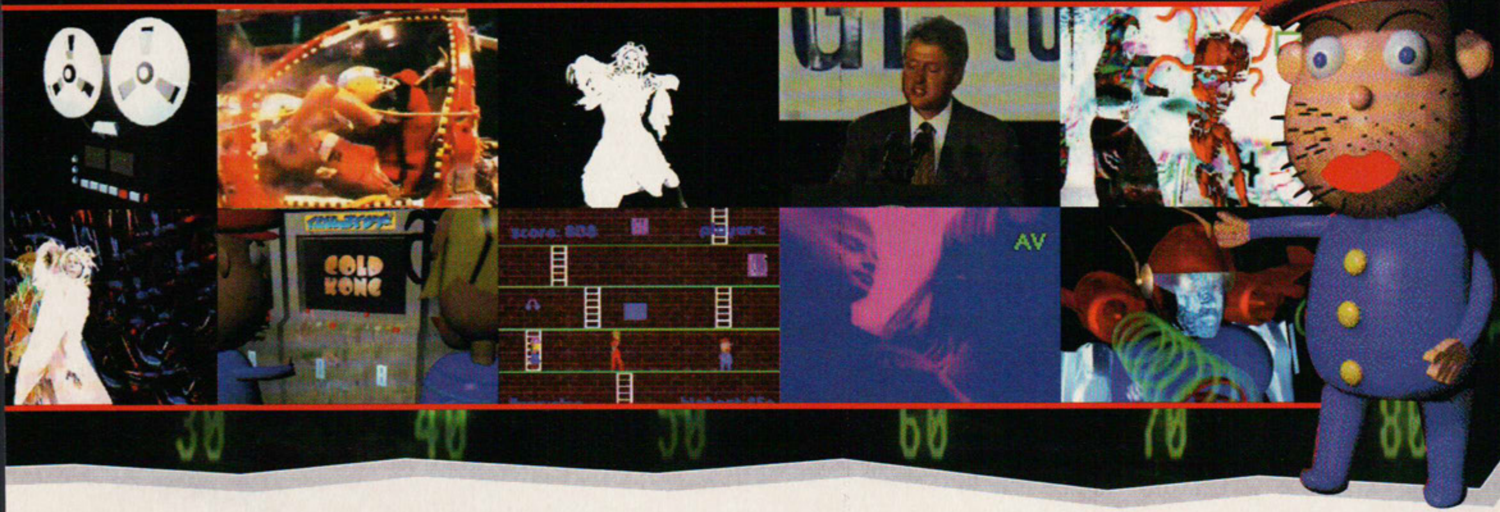
AF: So you're not really using the Amigas at the moment?

MB: No, but what's happened is that they've all gone out to a whole new crowd of people, people who have absolutely no money. There's all these people now, activists, travellers and so on and they've all got these machines which are so robust and they're just using them non-stop. It's great, I would be sad to see it all vanish.

AF: So where are you off to right now?

MB: We've got a new tour to support our new album Let It Play and we're going to the US, Japan and the UK. We're trying to do something new with our set. We're taking laptops and we want to run the whole thing from them rather than expensive studio gear.


Not content with just providing music, Coldcut now offer animations and software on their CDs. Unfortunately it won't work on your Amiga.



An interview with Aphrodite



Gavin King is Aphrodite. You may remember him from issue 37 of *Amiga Format*, when he was in the top thirty with a track called "Some Justice". He still uses an A1200, *Aura* and a huge Akai sampler for his particular brand of hardcore jungle music.

AF: So what have you been doing since *Amiga Format* last spoke to you?

A: For the first two years – nothing. I made loads of money and then spent it. With the emergence of Jungle I liked what I was hearing and I made a couple of tracks all Amiga based. I did one track called A Zone which was done just on one Amiga, the A1200. It went extremely well – lots of sales, loads of airtime in the clubs. It became a real anthem. Since then I've stuck with Jungle and developed Aphrodite Recordings. I'm on my 29th release and with every one I'm trying something different. It's going very, very well indeed. I'm remixing people like Jungle Brothers, LL Cool J, Apollo 440, Nine Inch Nails, East Seventeen and so on. What I do is to get people to dance.

AF: What's still good about the Amiga?

"I wouldn't consider using anything other than the Amiga for rhythm, it's second to none."

A: It's ideal for the rhythm and the bass. The bass on the Amiga is phat as phuck, it really is. Great bass sounds and for rawness of sound it's really unbeatable because one of the things about dance music is that when a thumping bassline comes out, topped off by a snare drum – your feet move, you can't help it. And there's this funny thing to do with compression. When you've got a 16-bit sample on your EMU or your Akai, it's weird it comes out to a certain level of noise. But on the Amiga, you take the same sample, the same breakbeat and you normalise it, you multiply it by 140 per cent add a bit of treble and suddenly you've got a sample that sounds good. It doesn't play well on its own because you might hear some of the fuzziness because it's 8-bit, but it's rolling along with the rest of your tune. The level is still the same, but for some reason it's two to three times as loud as your Akai. So all of a sudden you put that on 12" vinyl and you get this booming breakbeat that comes out of the speakers and people think "What's that?" and they're bouncing around to it. Then the next track comes in and it just sounds quieter. When I got the Akai, I spent about two months just trying to get the same levels of sound out of the Akai.

The other thing that's great is that the Amiga's so quick to work with. When I compare it to guys who work with the Atari, sometimes what for me are the simplest of tasks that might take twenty seconds, will quite often take them half an hour. So a lot of people comment on my production. They say it's incredibly detailed and all the rest of it and it's because you can do a lot more on the Amiga than you can in the same space of time on an Atari. That's the bottom line.



We talked to Gavin in our Issue 37. Do you remember that far back? It was the August issue for 1992.

AF: Do you think that if there was a new Amiga musicians would come back to it?

A: Just before Commodore went bust, I know they were developing a new Amiga. They talked to a lot of people like myself – anything to do with music we knew. We knew what we wanted from the machine, the graphics people knew what they wanted. And Commodore felt small like they would listen to what we had to say. What I would want from a new machine would be just slightly higher resolution graphics, a faster processor and as for sound, well instead of having four channels of 8-bit, all they needed to do was have four channels of 16 and you've got a very serious machine and the things you'd be able to do on that would be mind-blowing. They were inches away and it all fell apart.

Where Commodore went wrong, as opposed to where Bill Gates went right was that once you bought your Amiga, that was the last of your money that you gave to Commodore. You paid them 250 quid and that was it. All the little companies that sprang up that made accelerators, graphics cards and all the rest of it, Commodore didn't take any money from them. If you look at my machine, I spent £250 on the Amiga, but then I bought a disk drive, hard drive, a better processor, more memory, the Aura sampler. I spent more money on those and made more profit for the add-on companies than for Commodore themselves. And where Bill Gates goes right is that you cannot buy anything connected to his software that doesn't give him some money.

What was good about Amiga users – and I don't know what's happened to this kind of person now because I don't keep up with the scene – was that they would try to do something in 10k that Mac programmers would use 5Mb for. And not only that, but then someone else would do it in 8k, then another person would beat that and make sure that every single one or zero in that machine was necessary and it would make the code extremely fast – faster than any similar program on any other platform.



To be a top-notch musician you really need a mouse that works properly...



...and a sampler that can find the samples and tracks that you want.

AF: Any last words?

"The other thing that's great is that the Amiga's so quick to work with."

A: For doing this style of music it's perfect. You can't compete with Vangelis, but for doing dance – anything rhythm based – it's fantastic. I wouldn't consider using anything other than the Amiga for rhythm, it's second to none.

An interview with Allister Brimble



Allister Brimble might be a name you haven't heard before, but if you're a games player we can guarantee you've heard his music on many of the Amiga's best-known games. He's now made a concept album called Bang! Tick... Tick...

AF: How did you get started in computer music, as opposed to 'real' music?

AB: It all started off on the Spectrum. I bought one and started off by entering notes from my piano music using the Spectrum's beep command, producing some truly terrible music! Later I got a Spectrum 128 and heard a soundtrack by David Whittaker – Glider Rider. I was really amazed at the time and it really made me want to make my own music. So I bought another program, called Wham! – the Jukebox, which allowed you to play several notes at the same time on the Spectrum and I created a few tracks on that. Next it was onto the Amiga where it all really started. I wrote a few demo tracks on Aegis Sonix and sent them to a newly-formed PD company called 17-bit Software. They really liked what I did and published the tunes on one of their first disks. When 17-bit Software set up Team 17 I was obviously first in line to create the music for their games, such as Alien Breed, Project-X, etc. Just before that I had just sent these same demos to a firm called Codemasters so my first job was actually for a game called 4 Soccer Sims which eventually came out as Italia 90. The game was terrible and so was the music, but it was the first time I had ever written for a game.

AF: Do you think it's easy for people who are dab hands with *OctaMED* to find work like that?

AB: It can be tricky. The main problem with writing music for games is that you need to provide the sound drivers, so you need to be a programmer as well – which I was. Without providing the sound drivers, at least in the early days, you wouldn't get anywhere at all. You'd give the music to the programmer, but he wouldn't know what to do with it. You also have to be able to write sound effects, they are as important as the music to a computer game. Using a program like OctaMED is not the best way to go either because there are no good drivers available to play the tune back. If anything, you can get away with writing tunes using SoundTracker because there are loads around already.

AF: What real world instruments do you play?

AB: I play the piano. I started when I was seven and my father has always played it too. I mainly picked it up from watching what he was doing. (Allister can also play keyboards – QWERTY ones, just like the piano!) My dad used to play a lot of classical music, Chopin especially, so when I'm writing my music I notice a lot of Chopin creeping in there – I've just picked it up subliminally.

AF: Other than Chopin, what sort of music influences you, or do you write to any style?

AB: I will write music in any style, but I don't really know about styles that much so I find I have to buy a tape or CD of the style I'm supposed to be creating and I'll try and copy that style. But when I'm writing music for my pleasure, it's very Jarre-influenced. Because Jarre really built up from classical music and it goes on from there and I really like the melodies.

AF: What was your most recent Amiga project?

AB: Colonization by Microprose and I didn't write it from scratch – I had to convert it from the PC version. The problem was that the PC version used 20 channel AWE32 music and I had to convert it down to three channels for the Amiga (one channel left for sound effects). Tricky, but it came out quite well in the end.

"...using OctaMED is a lot more useful than using an expensive package like CuBase on the PC."

Allister being creative at his mixing desk.





AF: What is your favourite bit of music for a computer game?

AB: I think it would have to be Alien Breed. But I actually did a version of the tune with a lot more samples in first, that went on for about fifty minutes! They didn't manage to fit it in the game so I had to cut it down, but I'm still pretty pleased with the tune I got in there.

AF: When you are writing music for a game, do you watch it first?

AB: I'll often get a video of the game because they don't like giving out real products. Then I can see where the music will fit into the game. Mainly it's useful for sound effects because then I can fit them in with the animations.

AF: Do you still use your Amiga now?

AB: Yes. I find that using OctaMED on the Amiga is a lot more useful than using a very expensive package like CuBase on the PC. I like the drum machine format of it – the step time method. It means that I can work out very intricate complicated patterns without having to play them. I sometimes compose my tune in OctaMED, play via MIDI into CuBase and then add the sorts of effects that that package is good at into the tune then. It's also very useful as a kind of universal translator for when I'm writing music for more than one platform. I used it to make the music for The Lion King and Aladdin from Virgin, both multi-platform games.

AF: What was the idea behind Bang! Tick... Tick...?

AB: It's a concept album about the big bang at the start of the universe and the CD takes you through time until the universe collapses at the very end of time. Stephen Hawking's Brief History of Time gave me the idea for the album because before that I wasn't really interested in physics. I read that and really got into it. I thought, "he's written that, why not write a CD to go with it?"

AF: Having an RSC actor doing the narration on your CD is quite a coup. Is he a friend of the family?

AB: Yes. He's an actor called James Walker who went to the same drama school as my mum – Central. The latest thing he's been on TV in was one of the Yellow Pages ads where he was a cricket umpire.

AF: How's the record available to people who want to get it?

AB: It's available directly from myself.
(See the CD-ROM pages starting on page 102 for more details)

PREVIOUS AMIGA AUDIO PROJECTS

Full Contact
AlienBreed
AlienBreed II
AlienBreed Tower Assault
Project-X
Assassin
SuperFrog
Overdrive
BodyBlows
Ultimate BodyBlows
BodyBlows Galactic
ATR
Arcade Pool
Kingpin
Impossible Mission 2025
Colonization
SubWars
Goal!
Lion King
Mortal Kombat
Mortal Kombat II
Primal Rage
T2 Arcade Machine
Treasure Island Dizzy
Fantasy World Dizzy
Spellbound Dizzy
Miami Chase
Nitro Boost Challenge
MiG29 Soviet Fighter
CJ'S Elephant Antics
Rockstar
The Sword and the Rose
Italia '90
The Lost Vikings
Dungeon Master II
Zeewolf
Zeewolf II
Dojo Dan
Thunderbirds
Terries big adventure

NEW... POWER UP

AMIGA™ GOES POWERPC™

POWER UP YOUR AMIGA...

A further dimension is being added to Amigas with our new PowerPC based ***BLIZZARD POWER BOARDS*** *for A1200, A1200 based Tower Systems and A1500/2000 systems along with the new* ***CYBERSTORM PPC*** *for A3000/4000 systems. You'll now be able to benefit from performance many times beyond the speed of the fastest 680x0 based boards.*

Designed as upgrades for existing systems, **Power Boards** incorporate innovative dual processor technology where a fast PowerPC RISC processor is combined with a 68k CPU, dynamically sharing memory and system busses.

While the original AmigaOS 3.x continues to run on the 68K CPU, supporting existing applications to provide backward compatibility, the PowerPC CPU is backed by comprehensive PPC Libraries which provide the functionality to integrate PowerPC into an Amiga multitasking environment.

Software developers can easily optimise their programs, step by step, porting single tasks to PowerPC code, which then run in parallel with 68k tasks. Leading Amiga software vendors are preparing ported or optimised versions of their software packages already. It is anticipated that a large quantity of software products supporting the PowerPC will be available soon.

Power Boards will be delivered with a comprehensive suite of utilities, including the PPC library, as well as tools for creative users. Among them is a Public Domain GNU C compiler for PowerPC (including sourcecode), many demo programs and utilities with sourcecode. In addition to this software, free developer support is available via FTP site.

Last but not least, a PowerPC optimised version of CyberGraphX V3 with RISC optimised CyberGL/3D plus MPEG functions and libraries is included (along with a special GGX driver to support the AGA chipset) with full and comprehensive documentation.

	Blizzard 603e PowerBoard	Blizzard 603e+ PowerBoard	Blizzard 2604 PowerBoard	Cyberstorm PPC
PowerPC CPU	603e	603e	604e	604e
Clock Speed	175MHz	200MHz	150-200MHz	150-200MHz
Companion	68030	68040/68060	68040/68060	68040/68060
CPU	50MHz	25-50MHz	25-50MHz	25-50MHz
Est. PPC Performance	@ 175MHz	@ 200MHz	@ 200MHz	@ 200MHz
MIPS	Approx. 250*	Approx. 280*	Approx. 350*	Approx. 350*
SpecFP95	Approx. 3.1	Approx. 3.5	Approx. 7.1	Approx. 7.1
Memory Option	Max. 64Mb	Max. 64Mb	Max. 128Mb	Max. 128Mb
SIMM Sockets	1	1	4	4
SCSI On Board	Fast SCSI-II	Fast SCSI-II	Ultra Wide	Ultra Wide
Amiga Compatibility	A1200(+T)	A1200(+T)	A1500/2000	A3000/4000(+T)
Est. Availability	Summer '97	Summer '97	Summer '97	Summer '97

Blizzard 603e Power Board - A1200(+T)

The new Blizzard 603e Power Board is an inexpensive Power Up Accelerator for A1200 system owners who already have a board with a socketed full 50MHz 68030+MMU processor (these CPUs have a gold finish to the top surface) eg.50MHz Blizzard 1230-II, III, IV or similar. Featuring a 175MHz PowerPC 603e RISC CPU, the board has a socket for the 50MHz 68030, expansion capabilities of up to 64Mb high speed memory and built in SCSI-II controller.

Imagine the performance from your A1200 with this low cost board!

Blizzard 603e+ Power Board - A1200(+T)

The Blizzard 603e+ Power Board is the highest spec Power Up Accelerator for A1200 systems. Featuring a 200MHz PowerPC 603e RISC CPU, the board has a socket for a companion 68040 or 68060 CPU, expansion capabilities up to 64Mb of high speed memory and built in SCSI-II controller. This board is ideally suited to those owners who already use an accelerator with either a 68040 or 68060 CPU (ie. Blizzard 1240TERC or Blizzard 1260 owners or their equivalents)

If you want the BEST from YOUR Amiga A1200 - this is it!

Blizzard 2604 Power Board - A1500/2000

If you own either an A1500 or A2000 you can now take advantage of PowerPC technology with this 604e CPU RISC based board which has a socket for a companion 68040 or 68060 CPU, expansion capabilities up to 128Mb of high speed 64-Bit memory, built in Ultra-Wide SCSI controller and a high performance expansion slot for expansions such as the CyberVision PPC. This board is ideal for owners of accelerators with 68040 or 68060 processors such as the Blizzard 2040 or Blizzard 2060 owners (or their equivalents).

Want the BEST from YOUR Amiga A1500/2000? - Look no further!

CyberStorm PPC Board - A3000/4000(+T)

CyberStorm PPC is the ultimate accelerator for Amiga 3000[T], 4000[T] and systems with compatible CPU slots, offer blistering 604e performance - more than 10 times faster than any 68k based accelerator on sale today! Available with clock speeds of 150, 180 and 200MHz, the companion socket for the 68k processor accepts either a 68040 or 68060 CPU. The board provides 64-bit wide extremely fast memory expansion using pairs of standard SIMMs, dynamically shared by the two CPUs. Additionally, CyberStorm PPC comes with a DMA driven Wide ULTRA SCSI controller on board offering transfer rates of up to 40Mb/sec for even the most demanding of professional applications. A 32Bit high speed expansion connector, with DMA access to the main memory, is also provided for later upgradeability.

The 200MHz version of the CyberStorm PPC provides performance of more than 350 MIPS or approximately 8.1 SPECint95 and 7.1 SPECfp95*... breathtaking speed that goes far beyond that offered by most PC systems. In the second half of the year, an advanced graphics board will become available for the CyberStorm PPC expansion slot, providing a subset of the innovative CAIPIRINHA custom chip. By having a stand alone version of the DLRP (Display List Risc Processor), this board will offer superior display capabilities through higher VRAM-based resolutions, pixel depths and speeds, as well as the potential to begin developing software supporting the functionality of the forthcoming A\BOX system.

PRICING AND AVAILABILITY:

Options with or without 68k CPUs will allow users to fit the CPU from their existing accelerator. Delivery of Power Boards is scheduled for Summer 1997 following finalisation of CE approvals. Call now for full details.

Special prices available to existing BLIZZARD & CYBERSTORM board users

Blizzard 603e/603e+ Board...	175MHz	200MHz
with Empty 030 Socket	£289.95	
with Empty 040/060 Socket		£379.95
with 68030/50MHz fitted	£329.95	
with 68040/25MHz fitted		£429.95
with 68040/40MHz fitted		£459.95
with 68060/50MHz fitted		£614.95

POWER PC TECHNOLOGY, POWER PC SPEED and POWER PC PERFORMANCE

Cyberstorm PPC 604e Board...	150MHz	180MHz	200MHz
with No Processor	£479.95	£549.95	£629.95
with 68040/25MHz fitted	£519.95	£579.95	£669.95
with 68040/40MHz fitted	£549.95	£609.95	£699.95
with 68060/50MHz fitted	£709.95	£769.95	£859.95

**Quoted performance figures are estimations based on specifications from Motorola/IBM and are relevant to the PowerPC processor only.*
Prices Include VAT @ 17.5%.
Owners of other makes of board or those who don't already have an appropriate CPU - please call for prices.

Harwoods... always the Fastest Amiga Boards and NOW PowerPC Technology for Amigas too!



CHECK OUT... NEW LOWER PRICES ACROSS THE RANGE OF BLIZZARD AND CYBER PRODUCTS!

STILL THE FASTEST, NOW LOWER PRICED, NO ONE ELSE COMES CLOSE!

CYBERVISION 64/3D

64-Bit ENGINE A2000/3000/4000 (T Series) 3D VERSION 24-Bit COLOUR ACCELERATED GRAPHICS CARD.

For all Zorro-3 and Tower System A1200s with Zorro II backplanes.

The core of this great board is the VIRGE GRAPHICS CHIP from S3. With 3D capabilities, it's able to process complex 3D functions in hardware (eg. shaded & textured surfaces) with Trilinear Filtering and Shading/Fogging for super realistic Real Time 3D Rendering. When used with CyberGraphX 3D library, Cybervision 64/3D can even offer a broad range of 3D facilities for any software developer.

LOWER PRICES!

CyberVISION 64/3D... 4Mb Version £139.95

MPEG Decoder - added to the Feature Connector to provide real time MPEG audio and video decoding at full size custom screens or, in Workbench windows (HQ display using 16/24Bit modes from CyberGraphX Workbench). Stereo audio output is provided via the supplied dedicated line output jack. Upgrade to a Cybervision 64/3D and MPEG bundle (from previous Cybervision 64) for a special low price! £149.95

Monitor Switcher - with integrated scan line doubler. Designed to fit into the Amiga slot, this gives full automatic switchover from the standard Amiga signal to Cybervision 64/3D's output. Both cards may be fitted inside A3000/4000 models leaving three Zorro-III slots free. £69.95

CYBERSTORM II

CAN BE EXPANDED TO A FULL 68060

AMIGA 68040ERC AND 68060 ACCELERATORS

You can choose between the 68040/40ERC Cyberstorm II or the ultra powerful 68060 version. When you fit a Cyberstorm II 68060 Accelerator to YOUR A3000, A3000T, A4000 or A4000T you can for example, render a graphic with Imagine 2.0 software in just 2.4 minutes! Compare that with 10.34 minutes on a standard A4000 '040/25! With no jumpers, both Cyberstorm II models are fully plug and play and, A4000 users even have the option of a SCSI-2 Module if they wish (A3000s already have SCSI built in).

- Up to 128Mb of standard SIMMs can be installed and you can even transfer the 72Pin SIMMs from your Amiga A4000 straight onto your new Cyberstorm.
- Optional SCSI-2 Module
- If your budget currently only covers the cost of Cyberstorm II 68040ERC, you can always upgrade later to the full 68060 processor for the extra power!

Cyberstorm II 68040/40 40MHz 68040ERC - 0Mb, Expandable to 128Mb £239.95
Cyberstorm II 68060/50 50MHz 68060 - 0Mb, Expandable to 128Mb £389.95
Cyberstorm II SCSI-2 Module £69.95
Cyberstorm II SIMM RAM Expansions (Please call for a range of SIMM prices) £Call

LOWER PRICES!

1240T/ERC TURBO ACCELERATOR MEMORY BOARD

A1200T* TURBO ACCELERATOR and MMU/FPU for *TOWER SYSTEMS
40MHz 68040 - 0Mb Standard, expandable to 128/256Mb
30MIPS with 60 Nanosecond SIMM fitted.

CAN BE EXPANDED TO A FULL 68060

A super LOW COST A1200 Turbo Accelerator Board, ideal for housing on any *Tower System A1200 main board (mechanical dimensions, high power consumption and heat emission require an active cooling cap, we therefore do NOT recommend fitting to standard A1200s without the appropriate modifications etc.). The "ERC" Processors used on these boards are recycled and vigorously tested 68040 CPUs operating at 40MHz with MMU/FPU - an excellent guaranteed and competitively priced alternative. Available options such as the SCSI-IV Kit and RAM are shared with the Blizzard 1230-IV and 1260.

Blizzard 1240T/ERC Turbo 40MHz 68040 and MMU/FPU, 0Mb 32Bit Fast RAM, exp. to 128/256Mb £199.95

LOWER PRICE!

2040ERC TURBO ACCELERATOR MEMORY BOARD

A1500/2000 TURBO ACCELERATOR and MMU/FPU
40MHz 68040 - 0Mb Standard, expandable to 128Mb
30MIPS with 60 Nanosecond SIMM fitted.

The Blizzard 2040ERC is a super LOW COST board which offers A1500/2000 owners the opportunity to upgrade to the same performance as the Blizzard 1240T/ERC Board. Users will then be able to enjoy full A4000/040 power as well as take advantage of the built in SCSI-2 interface. The "ERC" Processors used on these boards are recycled and vigorously tested 68040 CPUs operating at 40MHz with MMU/FPU - excellent guaranteed competitively priced alternative.

Blizzard 2040ERC Turbo
40MHz 68040 and MMU/FPU, 0Mb 32Bit Fast RAM, exp. to 128Mb £249.95

LOWER PRICE!

CAN BE EXPANDED TO A FULL 68060

1260 TURBO ACCELERATOR MEMORY BOARD

EASY TRAPDOOR INSTALLATION... No modification necessary. Reliable low heat output.

A1200 TURBO ACCELERATOR and MMU/FPU
50MHz 68060 - 0Mb Standard, expandable to 64/192Mb
38.71MIPS with single sided 60/70 Nanosecond SIMM fitted.

Offers Amiga A1200 owners FULL 68060 POWER with a board that simply plugs into the trapdoor slot. Your A1200 will then operate at TWICE or even THREE TIMES THE SPEED of an '040 based upgrade and up to FIVE TIMES THE SPEED of a standard A4000! Available options such as the SCSI-IV Kit and RAM are shared with the Blizzard 1230-IV and 1260.

Blizzard 1260 Turbo 50MHz 68060 and MMU/FPU, 0Mb 32Bit Fast RAM, exp. to 64/192Mb £319.95

LOWER PRICE!

2060 TURBO ACCELERATOR MEMORY BOARD

A1500/2000 TURBO ACCELERATOR and MMU/FPU
50MHz 68060 - 0Mb Standard, expandable to 128Mb
38.71MIPS with 60/70 Nanosecond SIMM fitted.

Offers Amiga A1500/2000 owners the same specification as the remarkable Blizzard 1260 Turbo (A1500/2000s will operate at up to FIVE TIMES THE SPEED of a standard A4000) with FULL 68060 POWER and also includes built in SCSI-2 interface!

Blizzard 2060 Turbo
50MHz 68060 and MMU/FPU with SCSI-2, 0Mb 32Bit Fast RAM, exp to 128Mb £429.95

LOWER PRICE!

1230-IV TURBO ACCELERATOR MEMORY BOARD

EASY TRAPDOOR INSTALLATION... No modification necessary. Reliable low heat output.

A1200 TURBO ACCELERATOR and MMU
50MHz 68030 - 0Mb Standard, expandable to 128/256Mb
9.91MIPS with 60 Nanosecond SIMM fitted.

The highest performing 68030 Accelerator available for your A1200. With its 50MHz 68030 and MMU, the 1230-IV offers BETTER PERFORMANCE at a LOWER PRICE. With a SysInfo rating of 9.91 (using a 60 n/s SIMM) you can see the 1230-IV is very fast... a performance gain of up to 500% is achieved! Via its Fast Expansion Bus, an optional SCSI-2 Controller module can easily be fitted. An industry standard SIMM socket provides for up to 128Mb of auto-configuring 32Bit Fast RAM (up to 256Mb with the SCSI-2 option using its extra SIMM socket).

Blizzard 1230-IV Turbo 50MHz 68030 and MMU, 0Mb 32Bit Fast RAM, exp. to 128/256Mb £89.95
Fast 60 Nanosecond SIMM RAM Expansions - 32Bit, 72Pin £Call
Motorola Maths Co-Processor - 68882 PGA type FPU, 50MHz £39.95

LOWER PRICES!

MOTOROLA MOTIVATED

Blizzard and Cyberstorm products use MOTOROLA 680X0 and PowerPC series processors. They run **WITHIN** the electrical timing specification laid down by Motorola to prevent any possible overheating/reliability problems. So, when you pay for a 50MHz CPU for example, that's exactly what you get... not a 40, 33 or even a 25MHz CPU "clocked" to 50MHz! Look out for the **MOTOROLA MOTIVATED** logo - your guarantee of our commitment to quality and reliability - **BEWARE** of "clocked" CPUs! T/ERC and ERC processors used on selected boards are recycled and vigorously tested 68040 CPUs operating at 40MHz - an excellent guaranteed and competitively priced alternative.

BLIZZARD SCSI-IV KIT

SCSI-2 MODULE for 1230-IV, 1240T/ERC & 1260, & ADDITIONAL 128Mb SIMM SOCKET
(Fast SCSI-2 DMA Controller - upto 10Mb/s transfer rates with additional SIMM socket/extra RAM)

Blizzard SCSI-IV Kit £59.95

What the Magazines think...

Blizzard products have consistently achieved the highest magazine accolades and awards!

Amiga Shopper *"...1260 is destined to become the ultimate object of desire for A1200 owners."* - **91% STAR BUY Award**
Amiga Computing *"...If you want the fastest Amiga in the World, get this board."* - **92% BLUE CHIP Rating**
Amiga Format *"...Ride on the fastest A1200 in the World..."* - **95% GOLD Rating**

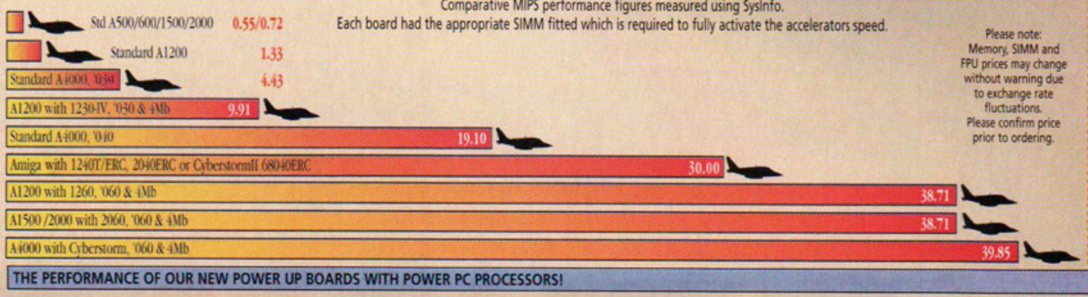
OUR RANGE HAS WON MORE AWARDS THAN ANY OTHER

1230-IV, 1240T/ERC and 1260 FEATURES

- May be disabled with simple keystroke on boot up - for full games compatibility, even badly programmed/older software
- Battery backed self re-charge Real Time Clock
- High performance expansion with full 32Bit wide DMA
- Easy trapdoor installation - no modifications required (1240T/ERC fits in Tower)
- 1230-IV features PGA FPU socket allowing optional 50MHz 68882 FPU

JUST COMPARE THE PERFORMANCE FIGURES FOR YOURSELF!

Comparative MIPS performance figures measured using SysInfo.
Each board had the appropriate SIMM fitted which is required to fully activate the accelerators speed.



Please note: Memory, SIMM and FPU prices may change without warning due to exchange rate fluctuations. Please confirm price prior to ordering.

COMPATIBLE WITH ANY STANDARD VIDEO SIGNAL AND S-VHS!

ProGRAB™ S-VHS 24RT Plus

NEW LOWER PRICES!



The revolutionary S-VHS **ProGrab™ 24RT Plus** with Teletext is not only the best way to get crisp colour video images into your Amiga, from either live broadcasts or taped recordings, it also costs less than any of its rivals. This real time PAL/SECAM/NTSC* 24-Bit colour frame grabber/digitiser has slashed the price of image grabbing on the Amiga and, at the same time, has received rave reviews for its ease of use and excellent quality results. ProGrab™ has earned honours from just about every Amiga magazine and Video magazines too! And... with ProGrab™ you needn't be an expert in Amiga Video Technology, a simple 3 stage operation ensures the right results... **Real Time, after time.**

STAGE 1

Select any video source with S-VHS or composite output. This could be your camcorder, TV with SCART output, satellite receiver, domestic VCR/player or standard TV signal passing through your VCR/player... the choice is yours.

STAGE 2

With ProGrab's software, select an image you wish to capture using the on screen preview window and Grab (because the hardware grabs frames in real time, there's no need for a freeze frame facility on the source device). Once grabbed, simply download and view the full image on your Amiga screen. ProGrab also includes a Teletext viewing and capturing facility from either TV or satellite sources.

STAGE 3

Use the 'grabbed' image with your favourite word processor, DTP or graphics package. ProGrab really does make it that simple!



ProGrab™ 24RT Plus...

- Supports all recent Amigas and is also fully AGA Chipset compatible. You can render images in any Workbench screen mode resolution including HAM8 mode (Amiga RAM permitting).
- Saves and Loads images in IFF/ILBM, IFF/ILBM24, JPEG, BMP, PCX, and TARGA file formats. ProGrab saves animations as Anim5 files and animations with sound (requires PCMCIA interface and separate sound sampler) as Anim5 + 8SVX files. A range of image processing effects, palette computing routines (AGA only) and dithering methods are featured in ProGrab Version 2.6.x. Photogenics fully supports ProGrab with a custom 'Loader' to enable grabs directly from within the program - this direct input method will save YOU more time when handling large images.
- Software has built in mono and colour animation facilities. Number of frames is dependant on Amiga RAM.
- Release 2.6.x software now includes...
  Additional Teletext Facilities - with either terrestrial or satellite TV signals.
  Larger Preview Window - double resolution and four times area of previous ProGrab software.
  International Support - now compatible with composite PAL, SECAM and NTSC - straight from the box.
  Larger Preview Window - double resolution and four times area of previous ProGrab software.



ProGrab™ 24RT Plus costs just £99.95 LOWER PRICE!
and is supplied with just about everything you'll need♦...

- ProGrab™ 24RT Plus Digitiser
- Latest ProGrab Version 2.6.x Software
- Mains Power Supply Unit
- Parallel Port Connecting Cable
- User Manual
- Input sockets for Composite and S-VHS.

♦ A video source cable will be required to match your own equipment - ask us for details.
**Standard ProGrab hardware is PAL/SECAM/NTSC compatible. Interlace mode options are available with PAL & SECAM only.*
ProGrab supports any Amiga with Kickstart 2.04 or later and a minimum of 1.5Mb free RAM.

PCMCIA Interface - A600/1200

ProGrab's optional PCMCIA Interface includes the latest version software and extends performance for serious or professional users - offering the following benefits...

- Faster downloading times (up to FIVE times quicker)
- Improved animation speeds of up to 11fps (mono) and 3.5fps (colour)
- Saving of animations direct to your Amiga's hard drive
- Freeing of your Amiga's parallel port for use by a printer or other peripheral
- Sound sampling and animation capabilities (separate sound sampler required, see right)

PCMCIA Interface LOWER PRICE! £29.95

Stereo Sound Sampler

Fantastic high quality 8-Bit Sound Sampler specifically designed for use with the ProGrab 24RT digitiser (PCMCIA Interface is also required).



This Hi-Fi sampler features the same 30MHz A/D convertor used in the ProGrab, maximum frequency is therefore only limited by your Amiga hardware.

Featuring a band width of 40Hz to 20KHz, quality is higher than standard samplers.

Hi-Fi Stereo Sampler £24.95

ProTel™ Terrestrial/Satellite Teletext Decoders

Amiga or PC add ons for grabbing terrestrial or satellite TV Teletext pages which don't need a dedicated Teletext TV/Video to operate... required signal is simply the output taken from a standard VCR or a TV that provides a suitable video out signal. Once information has been downloaded, ProTel allows you to view pages instantly... no more waiting whilst your TV searches!

ProTel™ for Amiga
Stand alone unit designed to match your Amiga allowing files to be exported as ASCII Text for use in your word processor or saved as IFF graphics for DTP presentations.



ProTel™ Amiga Teletext Decoder £44.95

ProTel™ for PC
ProTel PC Teletext Decoder - internal ISA PC card:



- Friendly software
- Capture speeds of 1000 pages in 2 mins
- Background tasking • Easy configuration
- Save page files (ASCII, BMP, ProTel formats)
- Native 32Bit Windows '95 application
- Requires 386DX PC and 8Mb RAM (12Mb Rec.), Windows '95/3.1 or Workgroup 3.11, VGA display, Mouse and 1 free 8/16Bit ISA slot - MINIMUM
- PAL and SECAM

ProTel™ PC Teletext Decoder £29.95

camcorder USER

Camcorder User commented... "If you're looking for a high resolution 24 bit digitiser then, at this price, ProGrab 24RT represents great value for money.*"*

ProGrab™ - Voted as The Best Video Hardware *product for the Amiga. Especially pleasing because the award comes from Amiga Shopper magazine's readers... Satisfied Customers!*

ProGrab™ - Amiga Format 93% Gold Rating *and comments like... "ProGrab 24RT Plus is quite simply the digitiser to get", "Incredible value for money - no other digitiser offers so much for so little" and "Offers far more features than any other digitiser near the same price"*

ProGrab™ - Amiga Shopper 95% STAR Buy *and remarks like... "Sharp, crisp and faithful to the original colours, we were mightily impressed" and... "Highly Recommended. Whether you are a Videographer or a Graphic Artist, look to the ProGrab 24RT Plus. It's a winner"*
Hi-Fi Stereo Sampler - Amiga Shopper 92% STAR Buy, *April 1997.*

AMIGA

CU Amiga said ProGrab™ is... "Just the job for beginners and semi-professionals on a tight budget" and, "very hard to beat. For the money, nothing can touch it*"*

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We welcome all major credit/debit cards with NO TRANSACTION SURCHARGES.

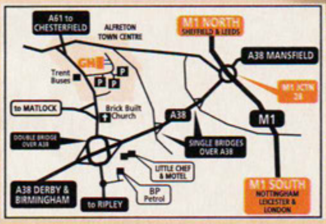
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We offer prompt shipment with fully insured express delivery options throughout the UK, Europe and Worldwide at a modest cost. If ordering by mail, please call to confirm the appropriate delivery charges.

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Manufacturers' standard warranties apply or, ask about GH's comprehensive extended options which are always recommended for professional users to minimise costly down time - details available on request.

ALL PRICES INCLUDE VAT
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AN EASY DRIVE FROM MOST AREAS,
We're open Monday to Saturday 9.00am until 5.00pm...

PLEASE CALL TO CONFIRM AVAILABILITY BEFORE MAKING A LONG JOURNEY TO VISIT US.

Final Data 3



A Powerful yet simple to use database with extensive features enhancing your potential to store important information EASILY.

Now in its third release, Final Data 3™ retains its ease of use and unique method of simple data definition and entry - but, now includes more advanced features too!

Even first time users can produce their own personal information files immediately! As you progress, you can take even more advantage of...

Running Calculations, Multiple Line Memos - enter an unlimited amount of text for each record, An extensive Query Requester and... NEW Final Data 3 features such as... Hidden Columns, Redefinition of Data (eg. from Text to a Memo column), Graphics, Sound and Animation (Requires use of Datatypes found in Workbench 3.0 or above).

- Easy definition of columns for categories of information such as name, house number, street, town, county, postal code, phone number etc.
- Built-in routines for rapid label printing
- Print/mail merge with word processors
- 'Memo' feature, acting like a 'Post-It' note, to enter large amounts of text within any record

For Amigas with floppy or hard drives running Workbench 1.3 or later & a minimum of 512K of free RAM (HDs - 1Mb)

☆☆☆☆☆NEW LOWER PRICE!☆☆☆☆☆
SoftWood Final Data 3 £19.95

THE APPLE ALTERNATIVE

IF YOU'VE REALLY GOT TO BUY A NEW SYSTEM TODAY...
the next best thing to your Amiga could be an Apple Macintosh.

BUT WHY MACINTOSH?
Just like your Amiga, all Macs are Motorola based but have had the advantage of PowerPC RISC CPUs for some time - remember, even Pentium PCs in Windows™ systems are still merely CISC processors! Like the Amiga, Macs were designed from the outset to be an easy to use system with their windowing environment fully integrated - not bolted on later. And... Macs not only outperform other PC systems, but have recently become very competitively priced too.



Software: there are over 1800 titles specifically written for PowerPC Macs alone, plus thousands from pre PowerPC days which are still compatible. Industry standards such as Word, Pagestream, Word Perfect, FileMaker Pro, Excel, Quark XPress, Photoshop and many others have been developed for Macs.
Creativity: Apple still lead the creative world - 80% market share in colour publishing, most web sites are authored with Macs and post production video editing is dominated by the Macintosh too.
The magazine you are reading now was published using Macs!
Internet and Communications: all Macs are Internet Ready - many include built in modems and fax facilities etc. and standards like Netscape and Internet Explorer ensure the Net is easily accessible.
Connectivity and Expandability: all Macs incorporate built in networking and external SCSI connections - adding printers, drives, scanners etc. really is plug and play!
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Mastering the markets

Nick Veitch speculates on how the Amiga can help you invest your money.

Money – get back. I'm alright Jack, keep your hands off my stack. Nearly everybody would like to have more money, and dabbling in the stock exchange seems like an easy way to get it.

GLOSSARY

OVERSOLD
Market prices that have declined too steeply and too quickly.

PRICE EARNINGS RATIO
The ratio of the price of a stock to the earnings per share. Or total annual profit divided by the number of shares outstanding.

RELATIVE STRENGTH
A comparison of an individual stock's performance to that of a market index (such as the FTSE 100). It is calculated by dividing the stock price by the index price. A rising line indicates that the stock is doing better than the market.

RESISTANCE
A price level where a security's price stops rising and moves sideways or downward. It indicates an abundance of supply. Because of this, the stock may have difficulty rising above this level.

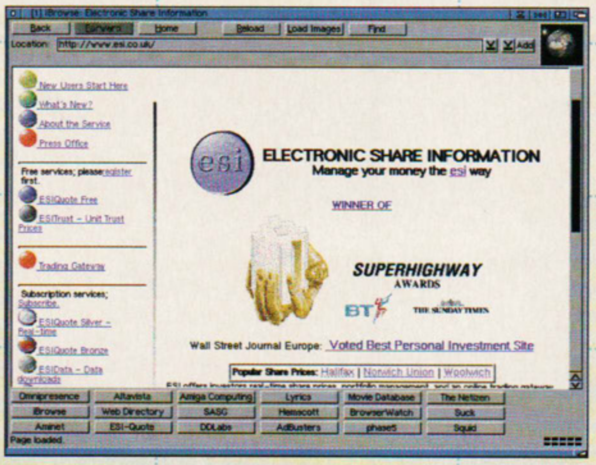
RETURN ON ASSETS
Net earnings of a company divided by its assets.

RETURN ON EQUITY
Net earnings of a company divided by its equity.

SPOT PRICE
The current cash price for which a share is trading at a specific time.

SUPPORT
A price level at which declining prices stop falling and move sideways or upward. It is a price level where there is sufficient demand to stop the price from falling.

Alas, like everything else, you have to work hard to earn money in stocks. It isn't all red braces and shouting "Buy, Buy" into your mobile. Although, if you are very lucky, a stock you select may double in value, the chances of that happening randomly are so small you may as well just have lots of goes on the lottery. You have to be armed with the necessary information to make an informed decision.

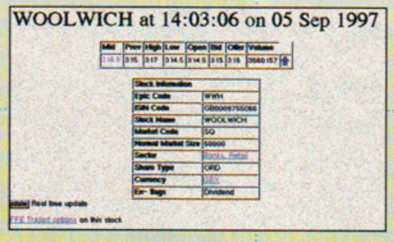


You will need access to a source of share price information. It could be that you get it from Teletext or the papers, but the ESI website is another great source. Delayed prices are available free!

There are four main areas to dealing in stocks and shares:

- Selecting stocks
- Actually buying and selling
- Managing a portfolio
- Knowing when to do what

Fortunately for you, your Amiga can be immensely useful in all of these areas. A computer is your best friend in the stock market – it gives you the information you need rationally, with no spin or bias. It won't lie to you (although, it is rather up to you to interpret the data it gives you).



A typical share quote from the ESI website. I have constructed an ARexx script to automatically download the prices I am interested in and import them into *AmiBroker*. If anyone is interested.

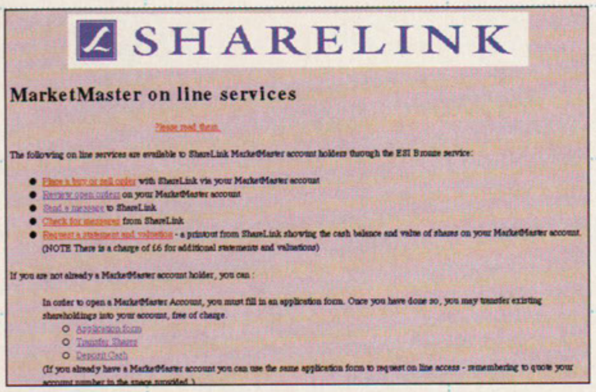
TAKING STOCK

The first and most crucial step is deciding what shares you are going to invest in. It will probably take you more time than you think, but background fact-finding is most crucial. After all you wouldn't put your money in any old bank would you? You wouldn't buy a car without knowing anything about it. You need to do some research.

If your Amiga is connected to the Internet, you are already onto a winner. There's loads of stock and share information available and a lot of it is free. Check out some of the websites listed at the end of this feature. Probably the best UK share price site is ESI www.esi.co.uk, which provides 20-minute delayed prices on all shares listed at the London Stock Exchange, all for free.

If you don't have a web-capable computer, you will have to resort to more traditional methods. In addition to the Teletext services (including share prices) on BBC2 and Channel 4, there are always newspapers. The Financial Times is the best known business daily, but it is an expensive investment if you intend to get it every day. A better source for the small investor is the "Investors Chronical". Published weekly by the Financial Times, this newspaper gives a lot of interesting background information, many helpful features on investing, and most importantly, recent share moves, new issues, buyout news and company reports.

The reports are important. A share's price is dependant on a number of factors, but the simple mechanics of it is that shares rise when they are perceived to be worth more – when more people want to buy them. If a company reports a loss of hundreds of millions of pounds, that it will be laying off staff or that dividends will be frozen, the share price is set to fall rather dramatically. Conversely if year on year profits are up, they have just signed a big deal or they are branching out into new territories, share values are likely to rise. A company's reports also give you important financial information, such as earnings, market capitalisation (how



You will need an account with a broker to get dealing. Again, a number of them are available online, such as Sharelink, so you never even have to leave your Amiga.

many shares have been issued) and net asset value. All these can be very useful.

The things to look for in a share are:

• Continuing growth – a company which made £1 million last year, £2 million this year and is projecting profits of £5 million next year is in good shape.

• New things – companies with new products, new management etc., are more likely to be innovative.

• Market leaders – market leaders often perform the best, simply because they are the best.

• Institutional sponsorship – if one or two major funds are invested in a stock, this can be a good sign. Institutions such as banks, pension groups and so on invest heavily in stocks, and if they have given a stock their seal of approval, there can't be too much wrong with it.

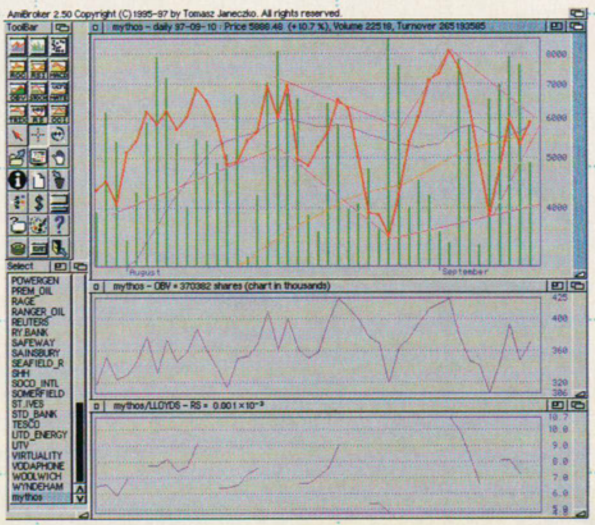
"...the excellent AmiBroker will help you decide what's a goer and what isn't."

Bad reasons to buy shares include:

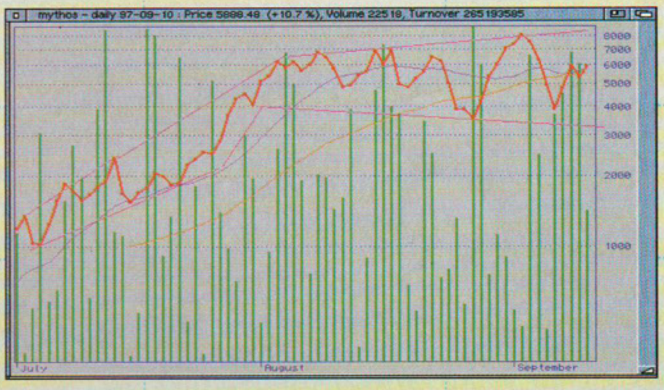
• Because you know the company well. That has nothing to do with the share value, and has no influence at all on whether the shares go up and down. Do market analysts come up to you in pubs and ask you if you ever heard of Premier Oil? On the other hand, just because you do know a company doesn't mean you shouldn't invest. Commodore were one of the big movers in the '80s

• Because one of your friends / hairdresser/ bloke in pub suggested it. Why does he know any more than you? If it is because he works for some company which has "inside" information (ie, information which a member of the public could not get, like accountants working on takeover deals etc), then it is illegal to use that knowledge. Indeed, it is illegal for him to give it to you.

Tracking the shares with a program like the excellent *AmiBroker* will help you decide what's a goer and what isn't. *Amibroker* is also capable of working out earnings per share information, and tracking a share relative to an index.



The definitive Amiga software to help you invest in shares. *AmiBroker* draws graphs, it analyses, it manages your portfolio – it does it all.



A share price pattern for the fictitious "Mythos Corporation" shows the share price moving up until a new base level is reached. This is a good pattern.

BUY BUY BUY

To actually buy or sell stocks, you will need an account with a broker. These days this is quite easy. You do not need to have tens of thousands to invest to get an account, you simply apply for one, much like a bank account. For the small investor, the most popular brokerage in the UK is Sharelink, who are what is known as an execution-only broker.

Essentially, they will buy and sell shares on your behalf, and maintain an account for you. There is a nominal transaction fee (currently £10) and a minimum bargain (£100).

Again, if you have an Internet capable Amiga (and your software needs to be able to run Secure Socket Layers), you can actually do all your trading on the Internet, day or night. The deals are actually still made by brokers, but it is a much faster and more convenient way of sending the information.

Sharelink's online service is free, but if you want to use it you have to go through the ESI Bronze website, which does require a monthly subscription. However, this isn't a bad idea, because it also gives you access to some online Portfolio management software.

GLOSSARY

BEAR MARKET
A long period of time during which share prices are generally declining (a depression).

BREADTH
Relates to the number of shares in any market sector.

BULL MARKET
Generally a longer period of time in which prices rise.

CANDLESTICK CHARTS
A type of share chart. The high and low are plotted as a single vertical line. The price range between the open and close is plotted as a rectangle on the single line. If the close is above the open, the body of the rectangle is white, otherwise it is black.

DAILY RANGE
The difference between the high and low during one trading day.

EPIC
The code by which a stock is known on the exchange. For example, Pearson's is PSON.

LIMIT ORDER
An order to buy or sell at a fixed price. A person can also place a limit order with discretion. This enables the broker to buy or sell within a small range, usually 1/8 or 1/4 of a point.

MARKET MAKER
An exchange member who makes a market by buying and selling for his own account when the public is not buying and selling.

MOVING AVERAGE
Most commonly applied to the closing price, the moving average is simply the average price over the last however many days.

OVERBOUGHT
Market prices that have risen too steeply and too quickly.

PORTFOLIOS

A portfolio is simply a collection of shares. In order to effectively know what you've got, and how much it is worth, you will need to do some sums. The ESI Bronze service does them all for you if you are a subscriber, but you can do it all yourself with a simple spreadsheet.

It is wise to keep at least two sorts of records. The first is a portfolio assessment, which is a snapshot of what shares you own, what you paid for them and what they are currently worth. This can easily be done in a spreadsheet. It may be useful for you to calculate the profit or loss on individual shares as a

Continued overleaf ➡

percentage, so you can set yourself limits. Eg, if my losses on any stock reach 10%, I'll sell.

The second type of record is a log sheet, detailing when you bought shares, and when you sold them (and how much money changed hands, and probably, how much you made or lost).

KNOWING WHEN TO SELL OR BUY

Of course, once you have your shares, the trick is knowing when to sell them. Although the prices seem to go randomly up and down, there are patterns to be found. The only problem is nobody really knows what rules the patterns are following at any given time.

AmiBroker includes a lot of sophisticated analysis tools, including the most common indicators used by professional stock analysts, such as MACD, OBV, TRIX and so on. Of course, these won't mean very much to you on its own. Unfortunately, most of these methods are overly complex to explain, and we don't really have room here to discuss them. If you register *AmiBroker*, you will receive a full manual detailing all the current analysis routines. Also, the book mentioned at the end explains some of them, and many of the Internet pages mentioned also have explanations of these methods.

AmiBroker has an auto-analysis feature, which you can program with a set of rules, enabling *AmiBroker* to signal when you should buy or sell particular stocks. You can test these rules easily with historical data.

Obviously, it isn't only about trends, news events can have a great effect too. For example, today it has been reported that Johnson & Johnson will not be licensing the lead product of Biocompatibles, with the result that the latters shares dropped by £4.15. Ouch.

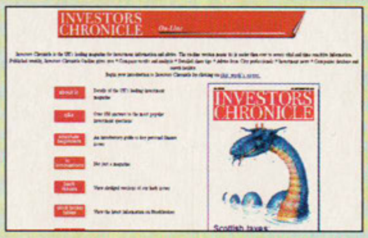
WEBSITES YOU MUST VISIT

FT – The Financial Times is perhaps the best known financial paper in the world. The website provides a lot of useful information, and is a good source of news items. www.ft.com



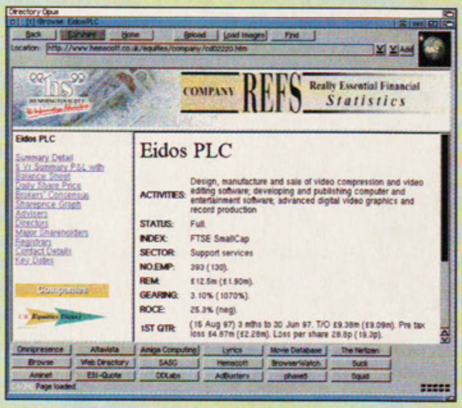
FT – in order to read the news on the Financial Times site, you will have to register – but it is free.

Investors Chronicle Online – The online version of the weekly magazine ends up a bit pricey if you subscribe to it, but there is a lot of free information here, especially stuff useful for beginners. www.investorschronicle.co.uk/

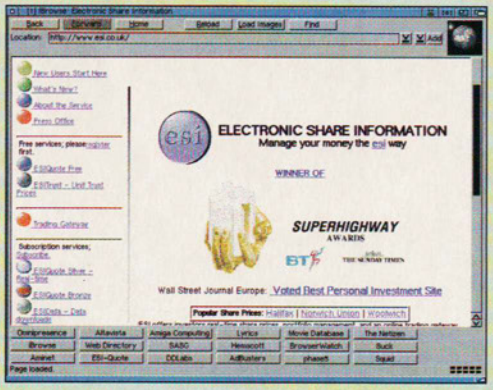


IC- It may not be worth you subscribing, but take a look at the IC site as it has lots of useful information for newcomers.

Hemmington Scott – this site maintains up-to-date financial reports and indicators on a wide range of UK companies, and it's completely free! www.hemscott.co.uk/



Hemmington Scott – not all services want to charge you lots of money. This site has a wealth of financial information on listed companies, and it is completely free – there is no need to register even.

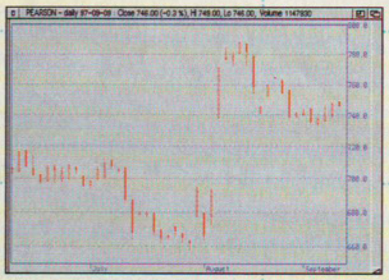


ESI – the most essential website. If you subscribe (about £5 a month) you will get online portfolio management and access to many other services.

ESI – currently the most comprehensive in terms of share information and other services. If you subscribe you get online portfolio management, access to real-time share prices, company reports and a trading gateway. www.esi.co.uk/

http://www.e-analytics.com/index.htm

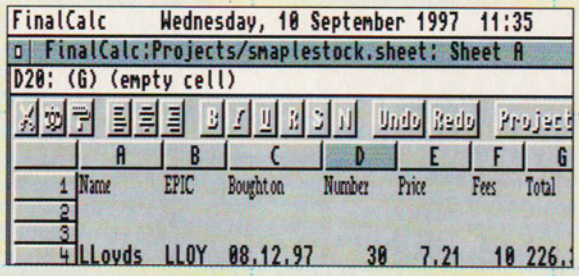
An excellent source of information if you are new to the stock market. Plenty of explanations of terms, strategies and indicators. It is American though, so some of the information does not apply.



This candle chart from *AmiBroker* contains a lot of information, but it can take a lot of practice to learn how to read these charts properly.

BOTTOM LINE

I hope that this feature has at least opened your eyes to the possibilities presented by using your computer to deal in stocks. If you are seriously considering investing in the stock market, you should certainly take a look at *AmiBroker*, and the website mentioned here. And remember, the value of your stocks can go up as well as down.



***Final Calc* – The best spreadsheet by far on the Amiga, though any will do to help you keep track of your investments.**

SOFTWARE YOU MUST HAVE

AmiBroker
Indispensable for monitoring your portfolio, analysing trends and just keeping track of share prices. The registered version includes a detailed manual. The Shareware version can be found on Aminet.

Final Calc
The best spreadsheet available for the Amiga. Incredibly useful for keeping track of you dealings. Available from Harwoods on 01773 863781.

BOOKS / NEWSPAPERS YOU MUST READ

How To Make Money In Stocks by William J. O'Neil / McGraw-Hill – (ISBN 0-07-048017-6). The best book I have read. Although written for the American market, the book deals mainly with stock selection strategies, and has many words of wisdom to impart to the newcomer. There are plenty of examples and stock graphs to hone your skills on. And it's funny.

Investors Chronicle – Weekly magazine which contains many helpful features, recent company reports, trends, tips – the lot.

Financial Times – 75p well spent, but you don't need to buy it every day. Almost all papers, well, serious ones, have company and financial information in them. Or you could read it at the library...



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68020/14.3MHz, 2MB RAM, No HD — £249.99

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	0MB	4MB	8MB	16MB	32MB
'030/33 & FPU	£89.99	£109.99	£129.99	£159.99	£209.99
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'030/40 & FPU (68030EC Chip)	£99.99	£119.99	£139.99	£169.99	£219.99
'030/50	£119.99	£139.99	£159.99	£189.99	£239.99
'040/25 & FPU	£179.99	£199.99	£219.99	£249.99	£299.99
'040/40 & FPU	£229.99	£249.99	£269.99	£299.99	£349.99
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Speed Increase of 2.3 times - 2.88MIPS ◆ Available with 0, 4 or 8MB of 32-bit RAM installed ◆ Uses a Standard 72-pin SIMM ◆ Optional PLCC Type FPU (Floating Point Unit) ◆ Battery Backed Clock/Calender ◆ Finger CutOut to help Installation ◆ Trapdoor Fitting - doesn't void warranty ◆ 0-4MB - PCMCIA compatible (for use with Overdrive, Squirrel etc.) ◆ Zero Waite State Design.

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POWERSTRIP

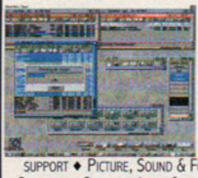
Power 4 normal plugged devices (monitor, printer, speakers etc) direct from the back of PowerBox. Turn ALL products on/off with just ONE switch. £19.99

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Workbench 2+ & Hard Disk Required

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SCREENPLAY



When you discover that some big name games are coming to the Amiga it's got to be good news. Check out this month's previews and you'll see what I mean. And it's not just the big names that are flooding in. The Reader Games section continues to grow in popularity and as there's always a chance of a publisher seeing what you've created, there's no excuse not to get those fingers coding. And for an insight into how it's done professionally, check out the progress of *Foundation* – our diary of a game in the making. Fascinating stuff and a clear indication that Amiga gaming is as alive and kicking today as it was five years ago (but with even better games). Turn the page and be glad. Things are on the up and up...

Andy Smith

AMIGA FORMAT'S REVIEW POLICY

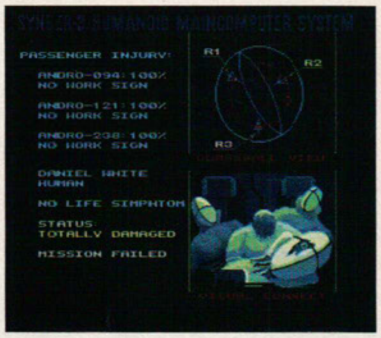
WHAT OUR REVIEW SCORES MEAN

Every month we scour the world's software houses for the latest and greatest Amiga games. We try to ensure we keep you as up to date as possible and we'll stop at nothing to bring you the best, definitive, no-nonsense reviews of the games that matter.

90+%	The crème de la crème. Only the very best, most playable and original games are awarded an AF Gold – the most highly prized rating there is.
80-89%	These games are very good, but due to minor flaws are not the finest examples of their genre.
70-79%	Good games which are worth buying, especially if you have a special interest in a game type.
60-69%	Average releases with somewhat limited gameplay and appeal. Games in this category tend to be flawed.
50-59%	Below average games which are unlikely to impress your mates or your wallet. Avoid.
40-49%	Overwhelmingly poor quality games with major flaws and appalling gameplay.
Under 40%	The absolute pits.

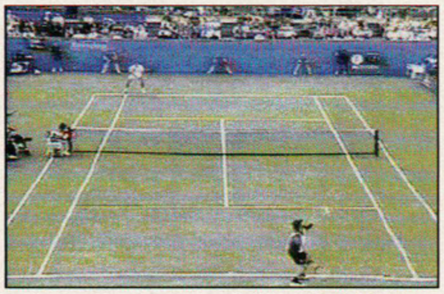


Street Racer (left) coming soon and looking wonderful.









Kevin stood in awe as Barry hoisted the ball high into the air and thwacked it towards him...



Having to compete in tournaments is bad enough but having to partner someone called Delwyn!



Des res. VGSOH. GCH. Conserv. Loft insul. Close to local amenities. On bus route. Detached.



Nigel's vision was often restricted by the large billboard nailed to his forehead...

Previews









Both Epic and Sadeness have big games nearing completion. Andy Smith checks them both out and keeps you up to date with some of the other games due for release very soon...

Street Racer



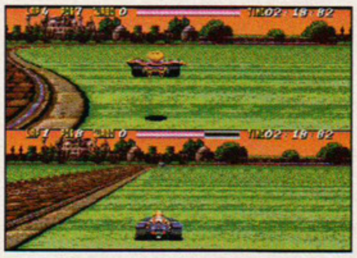
Street Racer	£29.95
Available:	October
Epic Marketing:	01793 490988
Fax:	01793 514187
email:	epicmarketing@dialin.net

This is arguably the biggest new game to come to the Amiga in the last year. As you might guess, it's a racing game and it's already seen the light of day on the SNES where it proved to be very popular, giving the seminal *Mario Kart* a damn good run for its money.

Up to four players can take part in the game, in which you can race not only through the Championship (where you've got Bronze, Silver, Gold and Custom cups to compete for – Bronze being the easiest with the easiest tracks and Gold being the hardest) but you can also race head to head with another character over a set number of laps. Or you can play in either of the game's two special modes: Rumble and Soccer.

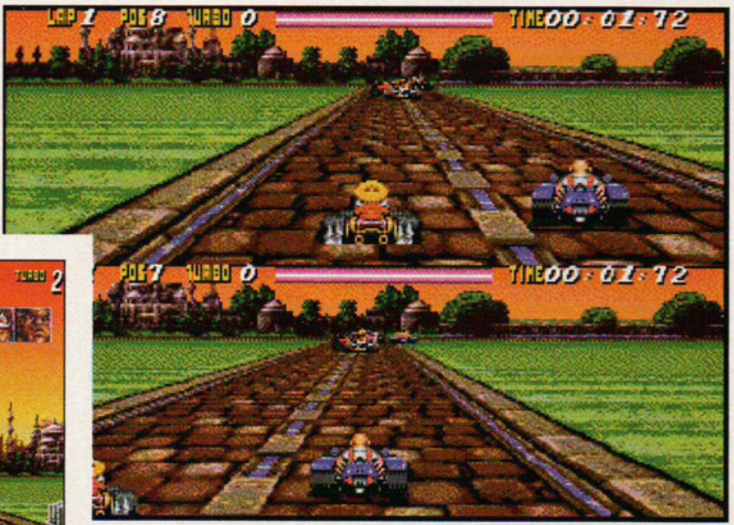
Rumble puts all of the players on a small circular track, where staying power is the name of the game and the idea's simply to be the last one to be 'rumbled' – that is pushed off the outside of the track by a fellow racer.

Soccer is, well, a bizarre game of footie where you drive into the ball to pick it up and then charge towards the goal – there's only one





Mixing it with the big boys. The reason there are two pictures of the same character (the girl) is because she's changing positions.



Split-screen, two-player racing. Wait until the other player comes alongside and lash out with a well-timed side-swipe. That'll teach them.



With two turbos in reserve it's time to start thinking about climbing up through the ranks. Watch him go!



In head-to-head mode it's just versus the other player (or players if you're in multi-player mode).



This soccer game is mad enough, but when you're playing on a slippy-slidey ice pitch it's bonkers!

goal with a spooky pair of computer-controlled hands guarding it – before, hopefully, sticking it in the net. Colliding with any of the other racers causes you to lose the ball however and then it's a race to pick it up again.

But racing's what the game's all about really. And racing with a couple of twists. Should someone get a little too close for comfort, the best thing to do is give 'em a whack round the chops. Each character has a different method of dishing out the punishment – the game's E. Honda-alike, for example, gives a great backhand slap. This keeps 'em out of your face.

It's not like the tracks are as straightforward as you'd imagine either. Though not littered, there are a few bonus items for you to pick up to use against the other racers – sticks of dynamite for example. And every time you pass the finish line you get a turbo or two to use as you hare around the place. Once you've finished the race you've got the option to watch it all over again, thanks to the game's playback mode.

Street Racer, like *Mario Kart*, owes a lot of its success to the fine balance it manages to find between straight racing game and wacky *MicroMachines*esque battling with the other racers' gameplay. Often it doesn't matter that you're in fourth place or whatever, just so long as you get to drop that dynamite right in front of the guy behind or you can get a good slap in just as an opponent's coming alongside you.

"Should someone get a little too close for comfort, the best thing to do is give 'em a whack round the chops."

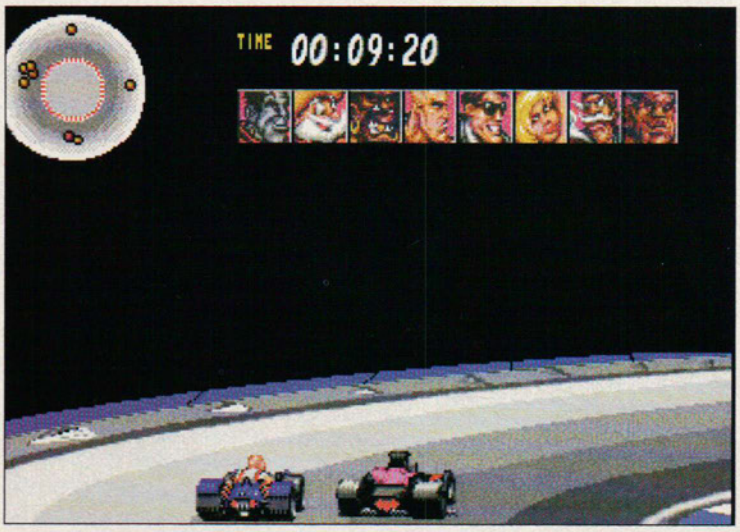
First impressions here at *AF* are that the game's managed to retain all of its charms and it looks to be pretty damn fast and smooth too.

The real test is going to be when we get a finished copy. At the moment the preview version we've been playing, while finished enough to give us some racing thrills, isn't finished enough to review. Epic reckon we should have a finished, reviewable copy of the game in time for next month, so we can let you know next issue. Epic also say that the game's going to be appearing in both floppy and enhanced CD versions. Good news for all those that haven't actually got around to upgrading yet. Wait for next month's full review before rushing out with your wallet though. There's many a slip twixt cup and lip and all that. AF



Choosing your car (left). The relationship between speed and handling is very important.





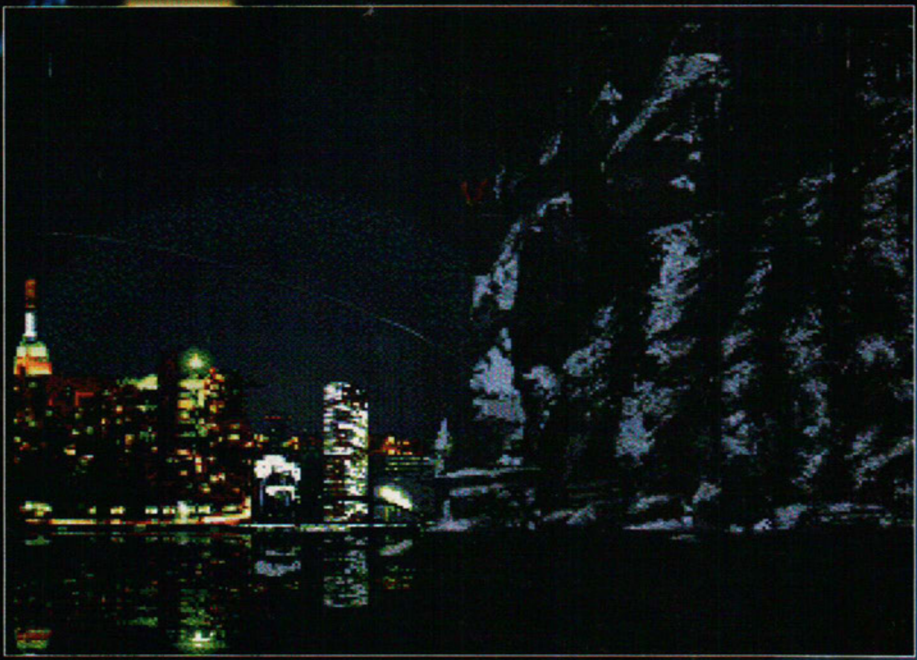
Playing soccer again (above) – it's football, not soccer. 4-0!, 4-0!, 4-0! This time on an indoor pitch. Note the spooky ghosty goalie hands. Very strange. The rumble game (left).

OnEscapee

OnEscapee	£29.95
Available:	October
Sadeness	01263 722169
Fax:	01263 722169
Website:	www.sadeness.demon.co.uk

Another potentially very big game is this one from Sadeness, that's been developed by the Hungarian Invictus Team coding group. It's a graphic adventure, very much in the *Flashback* mould but with even more impressive interaction.

Actual scenario details are a bit sketchy but as far as we can ascertain, you're one Daniel White who's trying to escape from a bunch of aliens. It looks to us like you're actually on an alien planet, having been transported there for some reason or other (biological experiments I'd reckon, they always are). After a car/spaceship crash, Daniel finds himself on the planet surface trying to avoid being recycled by the trash machine that's coming after him.





Our hero falls down a hole and evades the rubbish-collecting robot but manages to get into a whole heap of new trouble.

And this is where the adventure starts. It looks truly wonderful and the animation is as smooth as you like (it's all programmed in assembler for maximum speed) but the amount of work that has gone into the graphics is astounding. There's rain, reflecting puddles, beams of light (standing, flashing, sweeping and tracking), waving lights that filter through the surface of the ocean and a whole host of other things.

"...the amount of work that has gone into the graphics is astounding. There's rain, reflecting puddles, beams of light..."

Sound too is great – there's no speech as such (apart from during the intro) but the atmospheric music is fab – and it comes at you







Swimming underwater is all in a day's work for someone trying to escape from a bunch of aliens. Ouch (left), those air-bikes hurt!



At least our hero's found himself a gun so he can take on the robots on equal terms (well, equalish anyway).

constantly, there's no pausing for the music to load in.

The gameplay's sort of similar to *Flashback* – you move your character left or right (running, rolling, jumping and so on) through a series of logical puzzles and timing traps (there's a baddie in an underground cave that can only be passed when he pauses to chomp on a bat that's flapping around). It's also got plenty of 'pick this up and use it somewhere else' gameplay so you need your eyes peeled to spot anything looking slightly out of place.

Once you're on the later levels and have armed yourself you're going to start coming across more and varied baddies. Each baddie has a varying level of intelligence so there's a bit of working out to be done when you come across a new one, as to just how to get past/defeat them.

"...there's a baddie in an underground cave that can only be passed when he pauses to chomp on a bat that's flapping around."

OnEscapee is looking absolutely splendid at the moment and the limited example we've had of the game's gameplay is rather splendid too. We'll be putting the game through its paces properly when we've received the full version (that should make Ben happy because he's been playing the demo version to death), so watch out for a full review of this real soon (well, towards the end of the year anyway). We're looking forward to it already.

The graphics and animations really are quite splendid. Here you've found something that's gonna make the light work.







Getting past this weird tentacle plant thing (left) can be murder (right). Time to try something else.





The start of the game (below) and the first thing to do is avoid getting blasted by the rubbish-collecting robot (top right of picture).

And there's more...

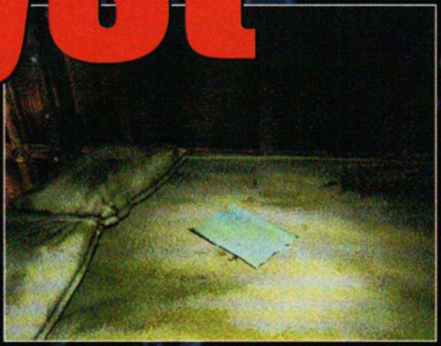
There are a whole bunch of new games still in development, here's a quick reminder of the three that we're most keen to get our hands on...

Myst

One of the biggest-selling PC and Mac games of all time is still undergoing some final tweaking (the game was due to be released this summer but has slipped somewhat), but it's still looking rather groovy.

For those that haven't heard of the game, *Myst* is a huge puzzle/adventure game. There's no hurry to complete your tasks, you can't get killed and you don't kill anyone else. It's all about clever puzzles which have been put together with amazing graphics and excellent sound effects.

Expect a rather fabby review of the game in *Amiga Format* some time over the next couple of months.





With graphics like this and gameplay to match (hopefully), Myst should be one of the best games of the year. C'mon clickBOOM, give us Myst!

Myst £30
Available: .... Autumn
clickBOOM: ....
1270 Finch Avenue West • Unit 13
M3J 2G4 • Toronto • Canada
email: ....info@clickboom.com

Sixth Sense Investigations

A bumbling detective and a wacky, laid-back sidekick. Sixth Sense should be interesting to say the least. Coming soon.



This wacky graphic adventure should have been with us already but Epic are still polishing the game (some of the text on the early versions we saw was a bit ropey). You're a private investigator with a psychic sidekick attempting to solve various riddles and puzzles. Wacky fun is always welcome in the *AF* office so we're just as keen to get our hands on this as you are.



Sixth Sense Investigations . . £30
Available: ....Next month
Epic Marketing: . .01793 490988
Fax: 01793 514187
email: epicmarketing@dialin.net

Genetic Species

Though we only previewed this *Doom* clone a couple of months ago, things have moved on apace. One of the biggest changes to the game we've noticed after playing our updated (but still not final) version of the game is the improvement in the weapons. There's now an awesome rocket launcher among other things and while the graphics look great, it still manages to slip along at a fine old speed. The *Doom* clone genre is overpopulated already, but Vulcan are confident they've got something head and shoulders above the competition in *Genetic Species* and although it's too early to say definitively, we're inclined to agree with them at the moment. Wait for that full review in the next issue (or possibly the one after that) of *Amiga Format*.





Vulcan's Genetic Species looks likely to give any Doom clone a run for its money. Expect a full review very soon.

Genetic Species £29.99*
Available: ....October
Vulcan: 01705 670269
Fax: 01705 662226
email: Paul@vul-soft.demon.co.uk

*£19.99 direct from Vulcan

Blitz Tennis

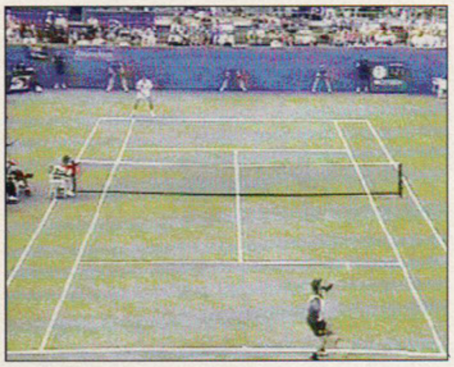


At the start of your tennis career you're able to fine tune your player's abilities. Very handy.

Andy Smith finds himself face down in the clay. And not for the first time this week either...



Straight into the net for a blinding volley. Of course, the computer player manages a fab passing return for the point.

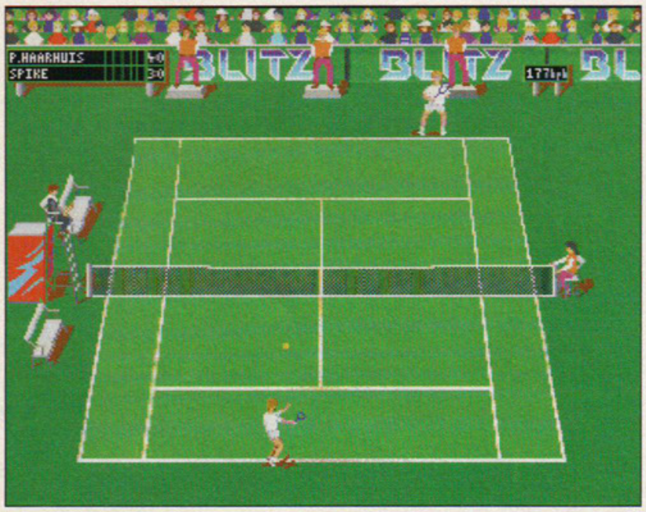


A lovely digitised cut-scene. The game's full of 'em and they all look pretty groovy.

Look Andrea, it's not me that's got the problem with drinking now is it? (Andrea's currently sporting a lovely bruised cheek having, ahem, 'tripped over' late one night after just the one glass of Lambrusco. Allegedly).

Anyway, I've been far too busy playing tennis to go out on the sauce. But yes, I've spent a fair amount of time down in the dirt on the clay courts of this *Blitz Basic* tennis game (now you'd never have guessed that eh?) which, curiously, refers to itself throughout the game as Centre Court.

Up to four humans can play (using a joystick adaptor), but you won't get them all together for a game of doubles. *Blitz Tennis* is singles only in either a one-off match or throughout a career of tournaments. Let's embark on a career then. First thing to do is allocate some ability points – you've got the chance to improve certain areas of your game here, your running, your forehand and so on. There aren't many points to chuck around so you're best advised to stick to the basics to start with.



Serving's almost completely automatic. Lob the ball in the air and use the joystick to direct it.

Out of control

Then we're in our first game. Unlike a lot of other tennis games, *BT* doesn't give you a great deal of control over the kind of shot you make. Where your character is in relation to the ball when you hit the firebutton to make a return, generally determines what kind of shot you're going to make. The only player-alterable variable being the direction you send the ball before you make the shot. This goes for serving too. Press fire and the ball's hoisted in the air, now all you've got to worry about is how long to hold the joystick left or right to send the ball in that direction. Too long and the ball's going way off to one side, too little and it goes down the wrong side of the centre line.

"If my player falls over sideways... one more time I'm going to have serious words with him in the dressing room!"

And this digitised piccy is one you'll see lots of if you're playing against the computer – they're tough.





There is the opportunity to make a lob or to attempt to play a stop after a lob (that's a new one on me) but that's about it. And that's what's so disappointing about the game. It's fast alright (a tad too fast I reckon) and the computer opponents are sharp, but it soon becomes a hit-and-push-the-joystick-left, hit-and-push-the-joystick-right kind of a game and that doesn't make for lasting enjoyment. It's a fine example of just why the Blitz authoring language is so versatile, but it's not a fine example of a game – and if my player falls over sideways like a girl one more time I'm going to have serious words with him in the dressing room!

Even at under a tenner I'd give this one a miss. Even if you're tempted by 'well, it doesn't sound complicated, maybe little Johnny would enjoy it' thoughts, think again. Johnny would rather have a golf game or something.

PUBLISHER: Epic Marketing 01793 514188
PRICE: £9.99
VERSIONS: All Amigas
REQUIREMENTS: 1Mb
RELEASE DATE: Out now

GRAPHICS: ●●○○○
Not up to much and some of the animation is decidedly ropey.

SOUND: ●●●○○
Not too bad actually. Not an aural delight, but alright nonetheless.

ADDICTION: ●●○○○
Tear your hair out for a game or two and you'll be hitting the ESC key to quit.

PLAYABILITY: ●●●○○
Run your player around and hit the fire button a couple of times. Simple.

OVERALL VERDICT:
A slightly worse than average tennis game. I certainly wouldn't recommend it.

53%

Sensible Golf

After playing with some silly golf games, Andy Smith's glad things have got back to being sensible.

Not that this game's completely sensible. It's more your arcade-style golf game than your 'serious' simulation. The format's pretty familiar – press the fire button to start the backswing, press again to come down for the ball and press a third and final time to get the accuracy. Simple enough.

And it's not like you've even got to worry about the wind direction and stuff like that (and just a cursory glance at how your ball's lying should be enough to let you know if you need to whack it a little bit harder because you're in the rough or a bunker or something). Simply move your cross-hair towards the pin and whack away. If your club's too meaty simply move the joystick up or down to change it (bearing in mind that the ranges given for each club actually includes the amount of bounce and roll). Sooner or later you're going to end up on the green and you can sink the thing.

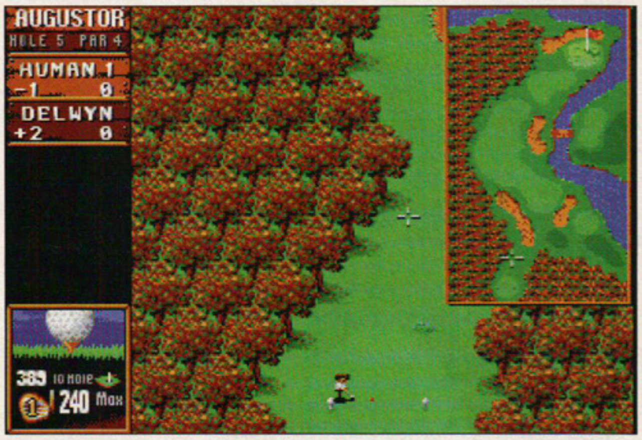


You may not sink it straight away because putting's a difficult thing to get the hang of. The greens are marked with arrows showing the slope direction but trying to compensate for them takes practice.

For those that are serious about their golf games though, there's plenty here to keep you happy. Loads of courses, loads of opportunity for your mates to join in, loads of computer opponents (who are maddeningly good at playing golf) and loads of wacky holes to play around on. Some of them are plain ridiculous – you might never see holes like these in real life but hey! That's what computer games are for. And the actual gameplay is cleverly scaled for difficulty. Some clubs have a greater margin of error than others in that you have more leeway to hit a good shot than others because the red 'safe' band on the downswing is bigger – giving you less chance to hook or slice the ball.

It's not the best golf simulation in the world but as a fun, arcade-style game it's hard to beat. You don't have to be a big golf fan to enjoy playing it. There are a couple of bugs to be exploited – getting stuck in trees means you're not going anywhere unless you aim for a part of the course that doesn't have any trees in front of you for example, but at least you can go over trees (unlike *Pro Golf Tour AF101* 35%). And some holes are best played cynically. You'll get to find out that if you mess up in a particular way you're going to be in a better position than if you'd messed up in another way. All in all, it's fun. Nothing to get overly excited about but at the price it's got to be worth a look.





Preparing to tee off (below). It's always advisable to call up the map screen before your first shot, just so you know where the hazards are. This hole looks pretty straightforward.

> **"Loads of courses, ...loads of computer opponents and loads of wacky holes to play around on."**



Use the familiar swing-o-meter to determine the strength and accuracy of the shot. I've spannered this.





Very satisfying (top). The ball goes flying through the air (below). What's the betting it hits a tree?

PUBLISHER: Epic Marketing 01793 514188
PRICE: £9.99
VERSIONS: All Amigas
REQUIREMENTS: 1Mb
RELEASE DATE: Out now

GRAPHICS: ●●●○○
Good and clear but not very exciting. As you might reasonably expect really.

SOUND: ●●●○○
The odd bird tweet, the occasional drop of speech. Again, nothing to get over excited by.

ADDICTION: ●●●○○
Get going and you'll find you want to play 'just one more hole'.

PLAYABILITY: ●●●○○
It doesn't take long to figure out how to get the most from the game.

OVERALL VERDICT:
Best played with mates – the computer opponents are teeth-grindingly good.

79%



Coming soon to an Amiga near you – a new real-time strategy wargame. Author, Paul Burkey, talks exclusively to AF...

Foundation

WORK IN PROGRESS

There haven't been many developments in the Amiga strategy game genre for some time. I started working on *Foundation* in a naïve attempt to clone my favourite game, *The Settlers* – you may have seen the old map editor on an *Amiga Format* Coverdisk last year, which was a real source of inspiration.

Since those early days, *Foundation* has changed in many ways and so has the direction of the gameplay. The reason behind this is simple: strategy gaming has evolved over the four years since *The Settlers* arrived. Most importantly, we have learnt that complexity is not always preferable to simplicity – just look at the raw playability of games like *WarCraft II* on the Mac.

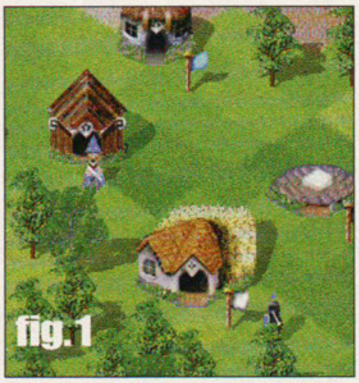
Here I'll try to explain how some of the concepts were developed to advance the gameplay, and how I cut out the superfluous elements to make room for more freedom and fun.

A land of olde...

The basic set of people that make up the game are the Peasants and the Maidens. If you build a Barracks, a Wizard Hut or a Laboratory you can then train your Peasants to become Knights, Archers, Wizards, Scientists and other units that make up your population.

I decided it would be better to have fewer buildings in the game. This means that the player doesn't have to spend ages waiting for all the essential buildings to start working, before the real action can start. Instead of having a separate mine for collecting stone, coal, oil and ore, I created one mine that can be used to gather all the minerals at once. To speed up the building process I gave the job to the Wizards. You place a foundation on the spot where you want your building and a friendly Wizard will take a short walk before he casts his Magic and your building is ready. Protecting your Wizards from the enemy is a subtle addition to the gameplay (fig.1).

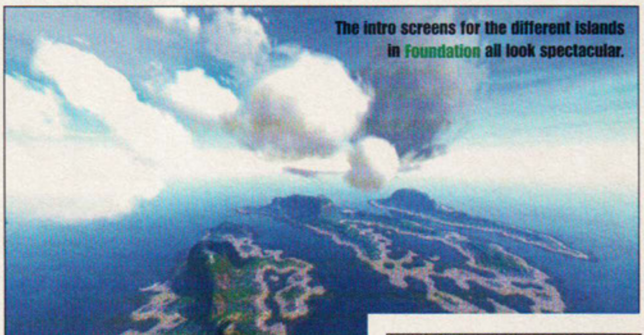
In the world of *Foundation* the elementary tasks are never simple, due to the total freedom you have over your people's actions. If your enemy sends his Wizard to create a large fort close to your land, then it should always be in your power to guide a group of strong Knights to take over the Fort before the new occupants arrive. In this game there are no boundaries, so land disputes are common.



You'll have to make sure that your Wizard is kept safe and sound – he's the heart of your game.

Back to basics

Most buildings will work with three groups of resources (fig.2). The first group is food. The next group includes supplies and workers. The Armoury, for example, could have three units of steel, three units of coal and three Peasant workers. The workers would be creating the armour using the steel and coal. The end result would be one unit of armour placed in the third group, which is the output. All the resources in the three groups have a "desired level". In the case of the food group this is fixed at one for each of the three food types. In the other groups the level is variable. If you are short of Peasants you could decide to lower the number of workers to one or two. The output level can also be altered. For this example I will use the mine which has four outputs – each of which can be set to off, one-ten or continuous. Once an output resource is created the workers will take it to a place of need. In the case of the armour it would be taken to the nearest barracks or to a nearby warehouse if that's closer. While the worker is taking the armour to its destination, the rest of the workers will be busy labouring away on the next output. When there are many different buildings in your village this system runs beautifully and it becomes a pleasure to watch people going about their jobs.



The intro screens for the different islands in Foundation all look spectacular.



Although the Knights will be generic, look out for famous faces on the Peasants.



The new Hi-Res graphics show so much more detail than the original buildings, it makes the game look much better.

> **"In this game there are no boundaries, so land disputes are common."**



Although Foundation isn't complicated to play, it is complex and balancing the wide range of materials will occupy you greatly.

More details...

Foundation is due for release in November of this year. SAdENESS Software are taking advance orders now so if you're interested, contact them at 13 Russell Terrace, Mundesley, Norfolk NR11 8LJ or call 01263 722169. More information can also be obtained from the Sadeness web site so point your browser at www.sadeness.demon.co.uk/foundation.html or email rich@sadeness.demon.co.uk

Some things need dressing up to make them appealing. Some things don't. Andy Smith checks out the games with the least dressing up imaginable. These are, of course, the...

Reader Games

ON THIS MONTH'S CD

AFCD19:-ReaderStuff-/-ReaderGames-

And if the efforts of some of the authors are anything to go by, it's a jolly good job we don't get too much dressing! But seriously, this is the section of the mag where we showcase our readers' talents. Each month we receive dozens of submissions and here's where a sympathetic, but critical (if necessary) eye is passed over the games, in an attempt to encourage the authors to keep at it.

There's a £50 prize on offer to the author of the Star Game and, where possible, we put the games on the cover CD for you to have a look at too. You can even vote for the games that you thought were the best. Play the games and see if you agree with what I've written about them. If you don't, then feel free to write in and let me know why.

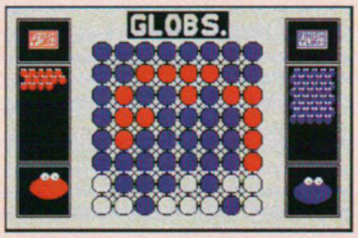
Right, here are the highs and lows of the games we've received over the last month. Enjoy, and don't forget to submit your voting form. And, please, please, remember to fill in the disclaimer form and enclose it with your photograph when you send your own game in. Cheers.

GAME: Globs AUTHOR: Ian Davison LANGUAGE: Amos Pro

Kicking us off this month is a very laudable clone of an old game called *Infection*. You and another player attempt to cover a board in counters of your own colour by placing your counters either side of the opponent's counters (vertical, diagonal or horizontal, by the way) and thereby turning his/her counters to your colour.

Originally Ian designed this as a two-player-only game but wisely decided to include the single-player mode. Once you've discovered how to turn on the automatic mode, so that you don't have to work out which counters to keep turning over all the time, it's a lot of fun. Ian's even included a challenge mode which then allows the player to go through a series of pre-set grids. Great stuff indeed.





Starting off (top) and things look very even. Later in the game (right) and things have gone distinctly blue.

Ian admits that the computer's AI is a little predictable, and that's about the only thing that's really wrong with the game – you can set up traps very easily and the computer will walk straight into them. It's still very well done though and although it's very simple to look at and could have done with a little more gloss, it plays well, which is what we like to see here at Reader Games.

VERDICT:

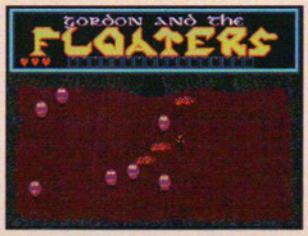
Effective, but lacks polish. At least there's a one-player mode. Defaulting to the automatic mode would enhance it as well. Nice to see the challenges there though. In summary, a fine effort.

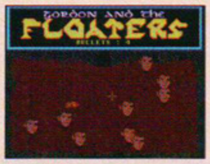
GAME: Gordon and the Floaters AUTHOR: Gordon Miller LANGUAGE: Amos Pro

Gordon's a regular here at Reader Games and this month he's come up with another goodie. Gordon's your character and all he's trying to do is get through the game's ten levels by opening a door at the top of the screen.

The problem is, one of the many floaters that populate each screen is carrying the key to the door. The only way to get the key is to drop a time bomb and hope the explosion kills whichever floater is carrying it. This isn't quite as easy as it sounds because these damn creatures never seem to wander around near your bomb. No matter where you put drop it, you'll find them randomly flying around some other part of the screen.

You only have a limited amount of bombs too. Fail to find the floater with the key before you've used them all up and you lose one of your three lives and have to do the level again (fortunately there's a password for each level). Thankfully you don't actually have to avoid contact with the floaters – Gordon wisely decided that that sort of added challenge would make the game too tough. It's not exactly cerebral or challenging but at least it's good simple fun for a short time.





Drop the bombs to kill the floaters (left). Shoot the game's author in the bonus game (top).

The graphics aren't the best but the game's solid, which is really what we're looking for. The game doesn't demand much skill though, aside from a good dodging technique to avoid the blast that your bombs make when they drop.

VERDICT:

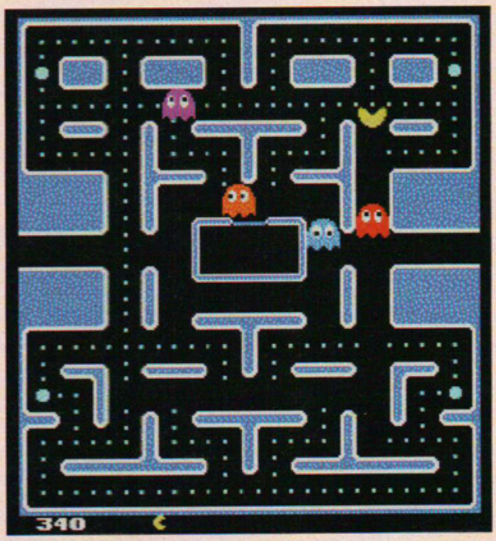
Playable and simple but with a limited lifespan. Even though the game gets harder it's just as easy to find the key after the first explosion if you get lucky.

£50 winner!

GAME: Compendium AUTHOR: Steve Eaborn LANGUAGE: Amos

The deserved winner of this month's Star Prize has come up with a lovely compilation of old classics. There's *Pacman* (*Mazeman* Steve calls it) which is virtually arcade-perfect. Then there's *Scramble* – which is too slow and is possibly the only disappointment on the disk, *ReelSkill*, a very polished fruit machine simulator (hey! Gamble CyberMoney™ to try and win more CyberMoney™!) and *Missile Command* – definitely the best game on the compilation. Add to that *Patience*, which speaks for itself and





Now that's a fine-looking **Pacman** clone (left). The **Scramble** clone (top) just isn't as good as the others – especially the **Missile Command** clone (right). Wonderful stuff and well worth this month's Star Prize.

Connect 4, (reputation precedes it) and there you have it. It's the fact that Steve has obviously put so much effort into getting the games as arcade-perfect as possible (with the exception of *Scramble* maybe) that wins him the prize. In *Missile Command*, for example, there are two missile silos (operated by the mouse buttons) and the screen shakes when a missile strikes the ground. The horrid floaty bombs have to be surrounded by several blasts to catch 'em and then you have the spaceships that fly across the screen launching more missiles. Just about everything's there. And it all plays wonderfully well (except for *Scramble* which is too slow).



Even the *Connect 4* game is polished and there's a one-player or two-player mode. In two-player mode the computer's no slouch either. Alright, so I've banged on about the *Scramble* game being a little disappointing but that's only because the rest of the games are so good. The version of *Scramble* that's here is actually perfectly fine to play and if you're no *Scramble* purist you're still going to find it great fun without picking it apart as I have!

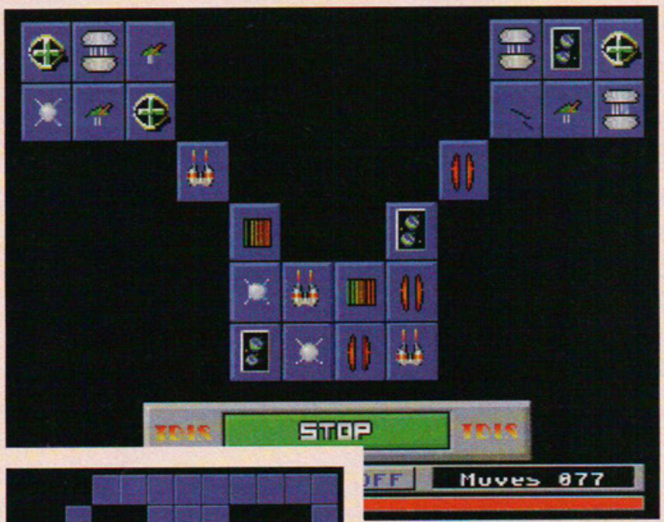
VERDICT:

A tremendous collection of top-quality games. You can keep coming back to this time and time again. Great stuff Steve and well worth this month's £50.

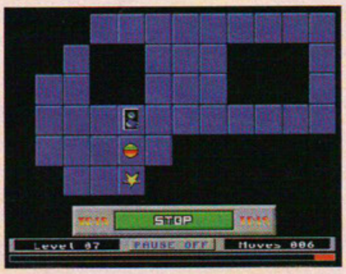
GAME: Tris AUTHOR: Ermanno Manzoni LANGUAGE: Amos

Ermanno's also no stranger to Reader Games after having his fine puzzle game *Jompis* featured in *AF100*. This is something very different however. It's a game we've seen many times in Reader Games, but not quite like this. Essentially it's that old pairs game where you have a bunch of picture cards face down and you have to click on a card to see the picture. Click on another and hopefully they match. If they don't, you must try and remember where the other card with the same symbol on it was. You get the picture I'm sure.

Ermanno's little twist though is that you're now looking for three cards with the same picture on 'em. Simple as that. There's a 'number of moves' meter at the bottom but other than that there's no high-score chart to aim for, you just clear the screen and go onto the next level, in which the gameplay's exactly the same but the cards are laid out in a different pattern.







It's a game of pairs, but you have to find three things each time. I'm not sure the wacky card layouts add anything to the gameplay.

And that's your lot. Searching for three things is a little bit different, but it's just a game of pairs and I'm afraid that doesn't get us very excited, no siree Bob, not at all.

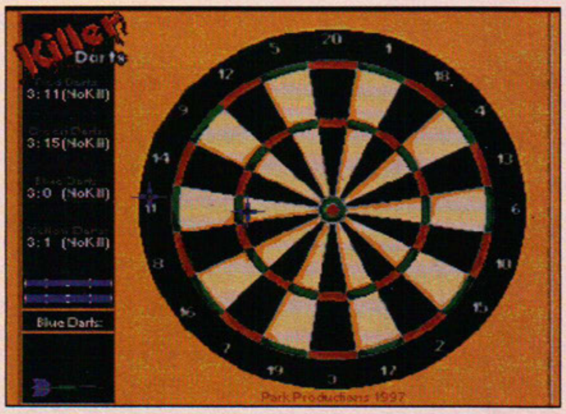
VERDICT:

A game of pairs but with, erm, three pictures the same to find. Ultimately a bit dull but it's well put together at least. Nothing special.

GAME: Killer Darts AUTHOR: Eric Park LANGUAGE: Amos

Now a good game of arrows is always fun. I've played 'round the board' before, where you start at number one and progress through the numbers until you hit the double 20 and finish. I've played 'killer' at pool too, where you have to pot a ball at each visit to the table. I've never played '*killer darts*' however. What you have to do, apparently, is throw a dart to choose a number and then become a 'killer' by hitting your number's double. The idea is then to kill the other players (two to four players in this version) by hitting their number's double. The first to kill off the other players' three lives is the winner. There are a couple of minor rules, like not being able to kill until you are a killer and not being able to hit your own double when you're killing (penalty is loss of life).

Eric's followed the familiar 'wiggly cross-hair' method of targeting – you move the mouse to get the cross-hair in the vague area of your number and then press the mouse button to release the dart. Accuracy and power can be used to correct any slight errors in the initial targeting. Accuracy is governed by a meter that swings left-right, much like in a golf game, and you can hit the mouse button again to send the dart in the direction you want. Power is controlled in the same way, but now you can hit the mouse button when the meter's on the far left or far right, to slightly raise the dart or to let it drop respectively. Pressing the mouse buttons when they're both in the middle of the meter ensures the dart goes where you actually targeted it in the first place.





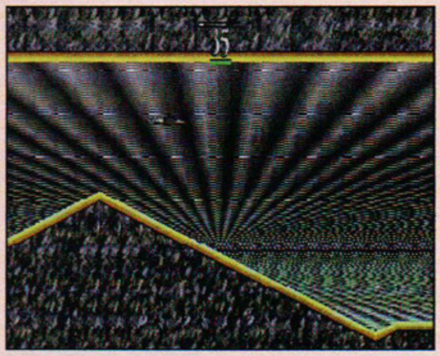
What's the betting that yellow goes sailing into the bull? Shyeah, right. If only the cross-hair was slightly less wiggly, this would be slightly more playable.

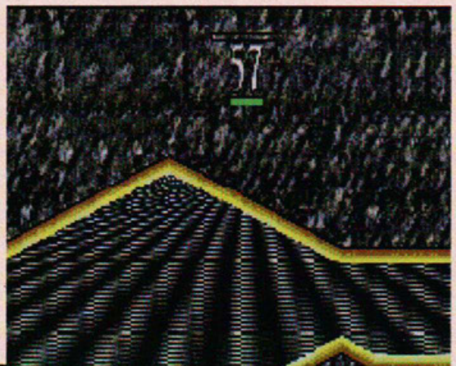
This should have been a lot more fun than it actually was. The wiggly cross-hair is just too wiggly and no amount of frantically throwing the mouse across the mat makes any difference. The cross-hair just seems to wander around on its own and you don't have enough time to wait for it to get even near the number you selected at the start of the game. Less erratic cross-hair movement would have made all the difference.

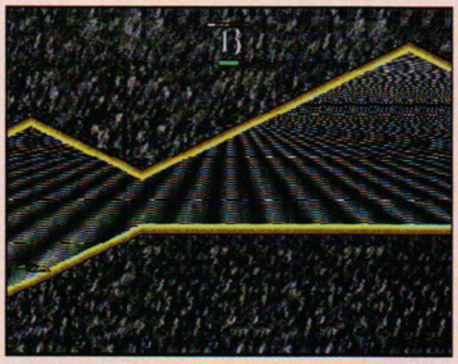
VERDICT:

Looks good and there should have been some scope for actually skillfully playing this game but I'm afraid that the erratic cross-hair and lack of control of the cross-hair renders it virtually unplayable.

GAME: GX Racer AUTHOR: Anthony Corcutt LANGUAGE: Blitz Basic









That scrolly background really is quite lovely. It's marvellously smooth too. What a shame you can't actually tell where your ship is...

Here's what happens folks, when you study software engineering at Sheffield University. Anthony describes the game as "...a sort of one-player racing/ Project X bonus level game". And that's precisely what it is. All you have to do is reach the end of the tunnel before the (tight) time limit expires.

To aid you you've got an accelerator (fire button) and that's, erm, your lot. You're flying sort of side on and the tunnel scrolls towards you from the right in a kinda *Thrust*-ish fashion. Anthony's obviously more interested in the actual code of the game because the gameplay's lacking. You can move your craft right over to the right of the screen if you want (though you wouldn't) or you can just sit back on the left of the screen and give yourself a couple of nanoseconds to move your ship up or down to negotiate the tunnel.

Incidentally, you should know that contact with the walls of the tunnel causes damage and when you've damaged yourself too much you blow up. Naturally.

The graphics are quite splendid – there's a wonderful trippy scrolling background and it's terribly smooth and fast but it's also pretty dull. You've got great acceleration and deceleration so it can get very hairy at times and it's tough to get through even the first stage. Unfortunately, it's just not very exciting.

Maybe giving the player more time to get through the stages and then making them have to do something along the way would have spiced things up (then you'd call the game *Scramble*) but it's difficult to say. As it stands it's a fine engine, it just needs some sort of game bolted onto it.

VERDICT:

A great-looking, fast-scrolling, smooth-running bore of a game. The basics are there now but some pretty thick icing needs applying before you'd want to play this for more than ten minutes.

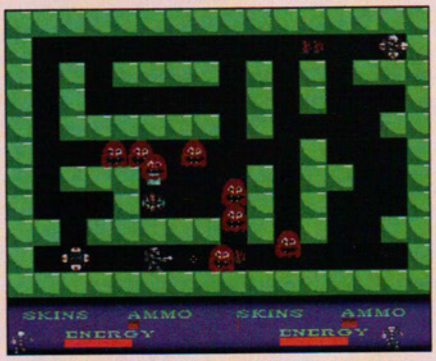
GAME: Cyber Skins AUTHOR: Peter Armstrong LANGUAGE: Blitz Basic 2

Here's another game that's lacking in the quality gameplay department. That's a little harsh, actually, as there is some evidence of flesh on the bare bones of this offering.

Two players battle it out in a small arena against a number of blobs. Shoot the blobs enough times and they crumple to the floor, allowing you to pick up their skins. Take the skins back to your transporter to be beamed home, at which point you can then go and collect another skin. The first player to gain ten skins wins the arena and the first to win ten arenas wins the game.

There's a blob generator on the level so even when you're both working together, you don't often have a screen that's completely empty of active blobs, (there's plenty of opportunity to be distracted when you discover that you can shoot the other player, although this becomes extremely dull when you realise that you have an infinite amount of lives).

There are a few other considerations. Ammunition has to be collected and there are extra energy icons to collect.



Shoot the blobs and take their skins back to the transporter. Simple, easy and actually quite fun in the short-term.



The graphics are a little plain and the music didn't seem to work properly on the version I played but overall the game's good fun. It's got the level of competition just right so that it can be a laugh when you and a friend get stuck into it. It's a shame there's no one-player mode but then it would be hard to see how it would work within the framework that's already there.

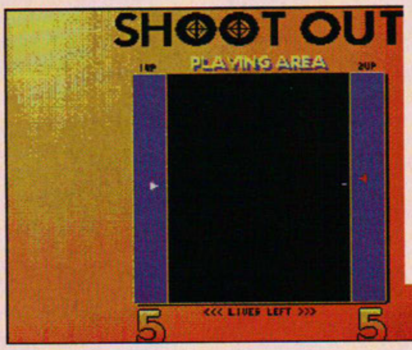
Simple, enjoyable fun then, that should keep you and a mate busy for quite some time. Possibly the only improvement (apart from more detailed graphics and sound that works) would be improved blob movement. They just randomly bimble around the screen a little too quickly, although I'm really nit-picking now. AF

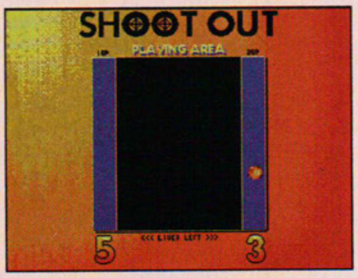
VERDICT:

A good, solid, fun two-player game. You won't come back to this tirelessly but it provides a chunky slice of fun. Nice one Peter, let's see some more.

GAME: Shoot Out AUTHOR: Gareth Griffiths LANGUAGE: Amos

We like Gareth at Reader Games. Not only does he live near my mates in Shrewsbury, but he doesn't give up. A few months ago I kicked his *Alien Pong Trilogy* so he revised and improved it. Then I gave it another kicking. Not really, but the concept was not the hottest to start with. Now he's come up with something that's very simple and provides a lot of short-term fun.





Player 2 bites the dust (top). This is a game that could really benefit from some more features. Get to it Gareth.

The game's a two-player-only shooting game (which is a shame because I can see how this could work in one-player mode). Both players control a small Space-Invaders type tank-thing that moves sideways up and down a small platform at the side of a small arena. The idea is to simply shoot across at the other player and score a point every time you manage to destroy them. Very simple and yet very tactical.

Both players spend their time trying to avoid running into the other's shots and yet trying to get the other to wander into their shot. This, somewhat surprisingly, turns the game into a fine cat and mouse affair where both players just sit at the side of the screen waiting for the other player to make a move first. Good stuff.

Again though, there is room for improvement. How about bonus icons in the middle of the playing area Gareth? A 'freeze the other guy' option would be cool, obviously not for long enough to get more than one, or possibly two hits on them (maybe armour should be included then you could collect bonus armour too?). It would make it more fun if you had to think about which icons were in the middle of the arena as well as worrying about not being shot. Let's see your next one soon, Gareth. AF

VERDICT:

A fine little game that's fun for a short while. Improvements could be made and I've a hunch that Gareth's probably thinking about them already.

MORE OF THE SAME PLEASE!

When you're sending in your submissions make sure you also give us:
1. an address where you can be contacted
2. details of the language used to create the game
3. a recent photo of yourself.

The address to send your stuff into is:
Reader Games • Amiga Format
30 Monmouth St. • Bath • BA1 2BW

VOTE FOR YOUR FAVOURITE READER GAME

Every month we're asking you to choose your favourite game. Just have a play on the CD and then fill out this coupon including the name of the game and the name of the author. At Christmas we'll count all the votes and announce the winner!

Choice 1: ....

Choice 2: ....

Choice 3: ....

Name: ....

Address: ....

....

Tel Number: ....

READER WARRANT

Everything included on the *AFCD* must have a reader warrant with it. Just cut it out off this page, sign it and send it in to us with your game and a recent photograph of yourself. A last reminder: if you don't include this warrant we simply won't be able to put your game on the CD – and that means you won't be able to have it judged by other readers.

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3. that there are no legal claims against the material provided;
4. that I have full power and authority to provide this material to Future Publishing.

Signature: ....

GameBusters

A journey of a thousand miles may well begin with a single step, but why take all those steps in between when you can cheat your way to the very last one? Andy Smith dishes out the tips and cheats to save your feets...

The Big Red Adventure

Part 1



Over the next couple of months we at *Amiga Format* are proud to bring you the complete solution to this rather fabby new adventure game (*AF98* 86%). Polish your perestroika, gather your glasnost and get ready to steal some crown jewels...

A bit o' game history

After the end of the communist regime, the Kremlin Palace, once the seat of Soviet power, was transformed into a museum. In here are kept the most important relics of Russian history, including Tsar Ivan the Horrible's famous crown. As we join the game, our hero Doug is casing the joint, getting ready to steal the Tsar's crown which is encrusted with diamonds, pearls and other king-like gems.

Other important historical items can be found within the Kremlin's walls: Leo Tallstory's typewriter – used to write his most famous novel 'War and Peacemaker', Strabinsky's piano – on which he composed 'The Firepig'. But the crown's what Doug's after, so here's how he's going to go about getting it:

Part One

At the hotel, Doug examines the photos taken at the museum. Using your inventory, open the envelope to discover the photographs from the museum. They have been developed as follows:



Taking the photographs at the start of the adventure. This is photograph 1 to be precise.

- Picture 1: The crown picture shows the locations of the Scanners.
- Picture 2: Museum security at front door.
- Picture 3: Museum roof and trapdoor.
- Picture 4: Same gallery, but including one of the cameras.
- Picture 5: Miss Glasnost 1993 at a fashion show in Red Square.

Now examine each of the photographs and go over to your suitcase. Pick up the suitcase using your inventory options and examine the contents. Here you will find a tape recorder and a tape measure for use later in the game.

Move over to the desk with the TV set on it and pick up the camera and the remote control. Use this to turn on the TV. You'll now be watching the end of the Matrioska Show. The show's presenter, Stroganoff, will tell you how to enter the show. He puts up an open invite to meet him at the Russian Doll Show. To play, you need only send the ticket from the New Pravda (the local TV guide). Before leaving your room, make sure you pick up the TV aerial and add it to your inventory. Now go to the hotel foyer.



Grab the measure from under your suitcase at the start of the game. Don't forget that TV aerial too.



The Foyer

Pick up and take the rope on the wall next to the entrance to your room. Now go over to the porter and give him your key before exiting via the bottom of the screen. Once outside,







The bloke at the front of the queue tells you he's after some razors. Looks like he needs 'em too.

continued overleaf ➡

Helping Hands

FASCINATION

Please, please help me! I'm hooked on a game called Fascination. I've just sprayed Formalin in the Doc's face but don't know what to play on the organ to advance. Can you help?

Julie Burns
Wallsend

Certainly Julie. Spray the formalin and then go into the adjoining room. Make a note of the month of the magazine and look at the torch under the microscope. Press the corner of the painting. Start the Zodiac wheel and choose the sign corresponding to two months before the publication date. Ignore the date on Kenneth's ring. Compose the melody of the torch on the organ, noting that A is la, B is si, C is do, D is re, E is mi, F is fa G is sol and + is flat. Say the publication month is April, so two months previous is February, making the sign Aquarius. If the message on the lamp is BAD+GE you will have to play si-la-re-flat-sol-mi.



A dusky maiden in the throes of ecstasy? Hmm, maybe. More likely she's having a kip. You can almost hear the snores can't you?

HERO'S QUEST

Please help me, I've been playing this Sierra game for five long years and have two problems: What are the answers to the questions the gargoyle asks? And how do I get the magic mirror?

Mark Churchill
Bristol

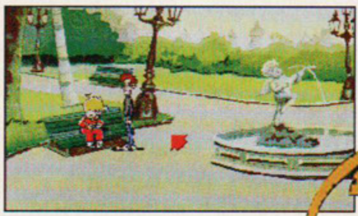
Allow me to put you out of your misery Mark. The answers are as follows: Favourite colour is purple, life is a bowl of cherries. Thieves password, give wrong answer.

As for finding the magic mirror, well, you're a long way away from it and you've got to get past the Minotaur. Good luck!



There's a whole load more exploring to be done once you've got past the gargoyle. Now where's that magic mirror then eh?

← go to the newsagent. Look at and buy all the magazines. On examination you'll find the Encyclopedia of Opera has a free cassette, the New Pravda has your free ticket and Capital has a stamp. Buy all the magazines by firstly talking to the newsagent. If you run





Get the game cart from the young kid (top) and use it on the cash machine at the station (above).

out of cash, put the TV aerial on the scales to the left of the stand and receive a further four Rouble Dollars.

Examine the free ticket to find you will have to answer three questions to qualify:

▼ 1. How many R's are there on the label of Dostoyevsky Caviar, the Muscovite's favourite?

▼ 2. What is the height, in cans of Vodkacola, of the statue of Karl Marx in Red Square?

▼ 3. What is the weight of the Great Bear, the bear meat hamburger produced by the Burger Tsar fast-food chain?

To answer the questions you must go first to Red Square.



"You'll talk to a large bearded man who tells you that the queue is for razor blades..."

Red Square

To the right outside the hotel is the way to the gum store in Red Square. The queue is huge so point to the right of the base of the statue and click when another caption comes up. This takes you across to the burger joint Mc Romanov.



When you're there, go to the bottom right corner to examine the old red car and find the broken camera. Take the camera and examine it to find a brand new film and walk over to the burger bar. Buy a Vodkacola and then a sandwich. When asked: 'Max or Gigantic?' go for Gigantic. Then get a Great Bear Burger. Don't eat your burger and don't drink your cola. Take the salt and bread from the counter and head back to Red Square instead.

Head straight to the man in the front of the queue at the gum store. You'll talk to a large bearded man who tells you that the queue is for razor blades which have only just come back into stock. Finish the conversation and go to the Japanese tourist in the middle of the square.

Get the tourist to take your picture using your camera with the statue in the background. This will take a few attempts before it's correct so examine each photo after it is taken. After the third duff photo your film will run out. Ask to borrow one from the tourist before selecting the spare film and getting it to reload. The fourth picture is correct, showing Doug next to the statue, with Doug being about half its size.

Examine the photo and then measure the can of cola with the measure you got from your case. To do this, select the can and keep





A crook swipes the crown from under Doug's nose. You'll see these chaps again (bottom).

doing so until Doug works out what to do. The can is 12cm tall. Doug is 128cm tall and the statue is twice his height so the statue is 28 cans tall.

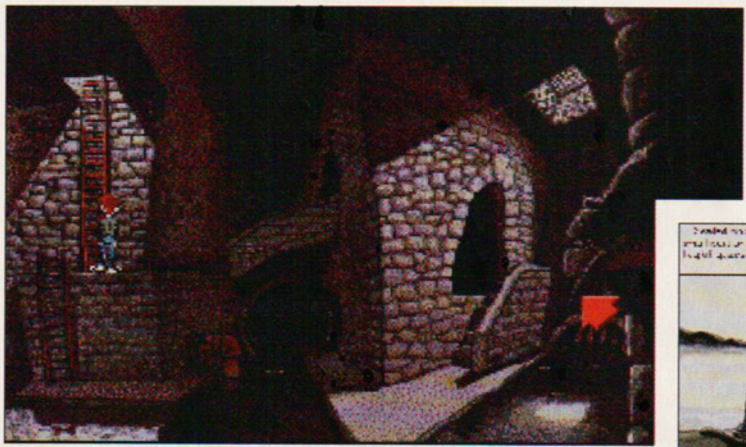
Now go back to the scales by the newsagent. Weigh yourself and then eat the burger and weigh yourself again. You will find that the burger weighs a good value seven pounds.

The Park

Go back to your hotel room and pick up your computer before heading to the park. Make your way to the centre of the park where you'll find a small boy sitting on a bench playing a hand-held console. Go to the boy and swap your lap-top PC for the games console. (It's the cartridge in the console you're after, you see).

Wait around now until you see a peddler. Talk to him and he'll try and sell you a watch before walking away. Remember where you saw the peddler because you'll be coming back to him. Now head to the railway station (via the road behind the newsagent). When you get there, go in and select the cart from the console and use it on the cash machine on the left. You should end up with 100 Rouble Dollars. Note that the KGB TV building is next to the station and then make your way back to the park.

On your way to the park, stop and chat to the man at the front of the gum store queue again. Doug



Our hero works his way through the secret passage from the studio to the museum.





will ask him to buy a tin of caviar in return for toilet paper. Go back to the park and meet the peddler. Buy the toilet roll from him for 100 Rouble Dollars. Head back to the queue and swap the loo roll for the caviar. Examine the time and find the answer to the final question. Now head back to the hotel foyer.

The Show

Back at the hotel, go the porter and ask to borrow a pen to fill in the ticket. Select the ticket to fill it in and then put the ticket in the envelope in your inventory, using the pen to fill in your address. Next, select the stamp that you found in the magazine to post the ticket.

Leave the hotel to go to the KGB TV studio. When you get there, post the letter. Now rush back to the hotel and ask the porter if there's any mail for you. The porter will hand you a reply from the studio. Open the reply and find the invite to the Russian Doll Show and the tickets. Go straight back to the KGB TV studios and hand the ticket to the receptionist. She'll give you a badge and direct you to studio 5 in time for your appearance on the show.

When you get on the show you're put straight on air. There are three questions about thieves to answer and if you get them correct you go on to answer the big question and win an air balloon. Don't worry if you get them wrong though, it just means you have to take a different route through stage one and we're gonna give you both the solutions anyway. Simple.

▼ If you win the quiz

Go back to the hotel room and enter the toilet after collecting your prize and adding the studio lights to your inventory. This leads to a new scene high above the city in your new air balloon. Fly to the museum and land on the roof. Once inside the museum, go to the crown room and switch on the lights near the crown. This blocks out the photo cells, stopping the alarm going off. Now go into the next room and combine the cassette with the recorder to use it. This will blast out the wonderful sounds of opera and have the added benefit of breaking glass cases into the bargain.

Now pick up the ring and the computer and go into the crown room. Select the diamond ring and use it on the crown case to cut a hole in the glass. Now then, unfortunately you're not going to get the crown because another thief will come in and take the crown from under your nose. You'll end up back at your hotel room with your face plastered over every newspaper in Moscow.

Head to the newsagent and buy a copy of Consolephobia magazine. Examine it and find the password for the Trotsky mainframe computer (it's the name of the tenor who sings with Donna Fatale at the Bolshoi). Head to the burger place and meet up with a couple of dodgy characters, Alex and Kos. They tell you they have a plan to break into the Trotsky mainframe and they want you to do it. In return they'll give you a passport so you can get out of Moscow before being arrested. They also tell you that the mainframe's connected to the Worldwide Communication Network and that their email address, should you need it, is Lenin.Komm.

Go back to your hotel and combine the TV remote with the tape recorder and then attach it to the ZX 81. All you have to do is find the node number for the WWC network. To do this, go to the KGB studios and examine the reception desk to find a scrap of paper. The number is KGB.NET 007 6 1 0. Now you can use this on the telephone in your hotel room to get the tape recording for Alex and Kos.

Take the tape to Alex and Kos and take your passport. Head to the station and show your passport to the guard and get on the Orient Express without further ado.

"You'll end up... with your face plastered over every newspaper in Moscow."



The second part of the game and our new hero, Dino, quizzes the drunk at the quayside.





Dino's so hard he tramps through the snowy wastes in just a cut-off t-shirt. Don't mess...

▼ If you lose the quiz

You win a consolation prize of a keyring and then you're left in the studio. Pick up the studio lights and use the keyring on the doll's head in order to enter a secret passage leading to the museum. Once inside, go to the crown room and switch on the lights near the crown. Now go into the next room and combine the cassette and the recorder and use it. From this point on you should follow the instructions from what to do if you had won the quiz.

Part 2

Method 1

You are now in charge of the movements of Dino Fagoli, an Italian ex-boxer who's a bit dim. You start off this part of the game on a wharf in a small town.

Leave the wharf and head for the drugstore (opposite the circus in Circus Square). Go over to the shelves and purchase a can of beans and eat

continued overleaf ➡



Dino finds out he's not in part three of the game.

Helping Hands

ZAK MCKRAKEN

What is the pattern you have to draw on the weird marking in the temple in Mexico and on the Sphinx in Egypt?

CS
Tyne and Wear



Zak stops for a croissant. This shot has nothing to do with the tip but it's the only one we had to hand, so it'll have to do.

Well CS, for both of these you had to be paying attention earlier in the game. In Mexico, use the yellow crayon on the strange markings and draw what you saw in the face chamber in Mars. When you get to the Sphinx, draw on the markings that you saw on the first huge face in Mexico. Hope that helps.

MIGHT AND MAGIC III

I'm begging for your help in this game. I can't solve the riddle from the corpse at B3 – 09:09. Can you help?

Fred Naisby
Tunstall

Sorry Fred, you stumped us with the riddle but here are some level codes that might help:

HOME
SEADOG
FREEMAN
DOOMED
REDHOT
AIR
WATER
FIRE
EARTH

Can anyone solve the riddle? Write in and we'll pass it onto Fred.



A big rat. Yesterday. You don't want to be finding one of these fellows in your skirting board now do you!

LEND A HAND

If you're having trouble with a particular game or have a solution to a question in the magazine, don't keep it to yourself, write it down or send it in on a disk and we'll do our best to print it.

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Dino discovers how to finally get rid of those pesky wasps.

them. This will make Dino feel lively so go into the circus and enter the weightlifting contest. Do this by walking straight into the tent and getting stopped by the ringmaster. Ask him who he thinks he is and he will announce that we have a volunteer to challenge Big Ursus in the weightlifting. Then go inside and lift the same weight as the champion to win 100 Rouble Dollars. Go to the drugstore and purchase a casket of rum and the headache pills. Go back to the wharf and enter the Inn. Pick up the tankard and give it to the landlord who'll fill it with water.

Leave the Inn and go back to Circus Square and enter Zelda's cabin. Talk to her about your future. Madam Zelda will tell you she visualises a land scorched by the Sun, a man on a horse and hidden treasure. She will go on to say she sees two strangers called Alex and Kos telling you your future depends on them. When Zelda leaves the room, talk to the parrot who'll tell you he wants some sunflower seeds. Exit and head back to the wharf.



After wandering through the snow, Dino gets back to civilisation.

Combine the headache pills with the water and give the mixture to the drunk. Talk to the drunk and ask him about his box. The box contains sunflower seeds that he'll exchange for a cask of rum. Swap the rum for the box and open the box. Go back to Zelda's and give the seeds to the parrot. The parrot will then have an argument with his female partner and leave her to go with you saying married life didn't suit him. Before leaving, pick up the skull and the potion.



Head back to the Inn and show the parrot to the old sea dog sitting near the door. The old dog turns out to be a captain who originally owned the parrot. When the captain asks how he can repay you, ask about the route of the oil tanker Potemkin and when it's due to dock here.

"The parrot will leave to go with you saying married life didn't suit him.. "

The captain will get round to telling you but don't rush him, he wants to tell you a few tales about his life on the high seas. Eventually he'll tell you that the ship's heading for Stokafisburg (about 60 miles from the Inn). You'll find out that there's a ship heading for Stokafisburg called the Santa Rosalia and the captain is a good friend of the old sea dog, named Vito Corallo. Sadly, the Santa Rosalia's not leaving for a week so you'll have to find another way of getting there.

Walk over to the Innkeeper and ask him how to get to Stokafisburg. He'll tell you to go to the Orient Express line at Zerograd, just up the road. Leave the Inn and head for the crossroads, which you'll find just beyond the circus.

At the crossroads, go straight on towards the woods and enter them. Head for the dark wood and turn into the channel that leads into the distance. You will arrive at a sign with a wasp's nest to the left of it.

Select your lollipop and show it to the wasp's nest. They'll chase you to a nearby cave. When you arrive, throw the lollipop inside so that the wasps follow it. This gets rid of the pair of wolves which means that you can safely enter.

The cave leads to another part of the woods so keep going until you reach the town of Zerograd. You'll see the train station in the centre of the town. Pick up the poster on the wall and go to the luggage office and show the poster to the ape. This makes the ape throw a banana at you. Pick up the banana and talk to Miss Molatova's bodyguard back on the platform. He will be extremely rude, so eat the banana and drop the skin on the floor and then talk to Miss Molatova. The bodyguard tries to hit you but slips on the banana skin. The bodyguard breaks his leg leaving a vacancy that you can fill by talking to Miss Molatova, she'll ask you to escort her to Venice, so you can get on the train.



A teaser shot from part three. Tune in next month!

And that's all the space we have this month. Next month we'll show you how to do part two slightly differently and then take you on to parts three and four. Don't miss out!

CHAOS ENGINE

Go onto the password select and enter the following code: BBMMMMMMMMMM and you'll start from the beginning but you will have £61389. The only snag here is that you have to play the preacher on a one-player game.

Andrew Slee
Hull



The navvie's all well and good but you'll have to be the preacher if you use this tip. Still, it shouldn't trouble you too much.

SUPERCARS 2

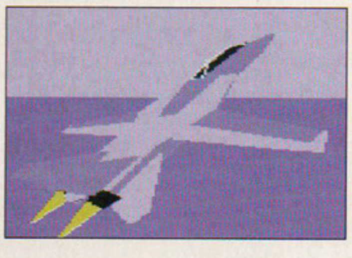
Use the names I WALK THE HILL for player one and INNARDS for player two to get 99 of every weapon and third grade in all add-ons. You'll also automatically qualify. If that cheat doesn't work, try WONDERLAND and THE SEER instead.

Clive Benson
Richmond-on-Thames



If you're having trouble in Supercars 2, simply use the code words above and cheat your way to victory.

F18 INTERCEPTOR



When the game has loaded and you are shown the credits, put the disk on write-protect. On the missions menu, press the key for selectable missions and you can now do any mission by pressing F1-F5. For extra missions, enter free flight and hold down 6, 7, 8 and 9 to enter the game. Quit and you can now access the extra missions.

Steve Tompkinson, Swindon





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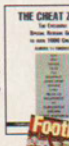
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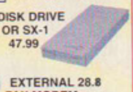
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PD Select

Two whiskey-scented tears trickled down the sides of his face, but it was all right, everything was all right, the struggle was finished. Dave Cusick had completed another PD column.

SPACEWALKER

By..........................*Roy Schneider*
Ware....................................*Free*
PD Library ....*PD Power*
No of disks.............................*One*
Price.....................*50p + 75p p&p*

Roy Schneider has probably had to cope with a good deal of joke-making at his expense. In his school days, his classmates no doubt reeled off endless 'Jaws' cliches – or perhaps, if our Mr Schneider is a younger fellow, his ears still ring with oh-so-amusing 'SeaQuest DSV' jibes.

This assumes, of course, that Mr Schneider isn't built like a brick outhouse and therefore more than capable of quashing such mickey-taking; and that the Roy Schneider who programmed this isn't the same bloke who starred in 'Jaws'.

Anyway, our Mr Schneider's first language clearly isn't English, as a quick look at the documentation on the disk will confirm. As far as I can make out, after scanning the semi-comprehensible text ("The szenario of this game is an old leaved ship deep in space", "Normal is, that no people are there... but the ways!!!" etc) in *SpaceWalker*, you must pilot a small probe around a colossal, derelict spaceship. You have very limited energy supplies and must avoid numerous traps and obstructions dotted around the labyrinthine ship, while observing a strict time limit.



Mmmm, snappy graphics – shame about the music...

Occasionally the three huge levels can seem a trifle linear, but for the most part, there is a refreshing amount of freedom afforded to the player, that is all too often missing from modern games.

With tidy, colourful graphics and music which mercifully gives way to the gentle humming of spacecraft engines once the game is underway, *SpaceWalker* is a well presented piece of software. Although it is slightly marred by some unforgiving collision detection routines and the fact that the game doesn't warn you when your energy and time supplies are seriously dwindling, this is nevertheless a competent effort which will appeal to patient gamers.

ZEN 16 – ISSUE 1

By ....*Zenon*
Ware ....*Subscription*
PD Library... Available from author
No of disks.............................*Two*
Price..................................*£1.50*

Zen 16 is described by its author as "a new Workbench-enhancing package," the first of a series which will be produced on a regular basis. It comes on two disks but must be de-archived to your hard drive, using the installation script provided, before it can be used.

The package consists principally of a large set of *MagicWB*-style icons. The author explains in the documentation that one of his main objectives in designing the icons was to give them a *MagicWB* kind of feel, and also to make them all the same size, so that they could be more neatly arranged using the Workbench "Tidy Up" function. He has achieved this admirably, although a few of the *Zen 16* icons (drawer icons in particular) look a little less attractive than their *MagicWB* equivalents. Still, *MagicWB* is Shareware and so costs a great deal more to get hold of than *Zen 16*, and the vast majority of the *Zen* icons are extremely stylish anyway.

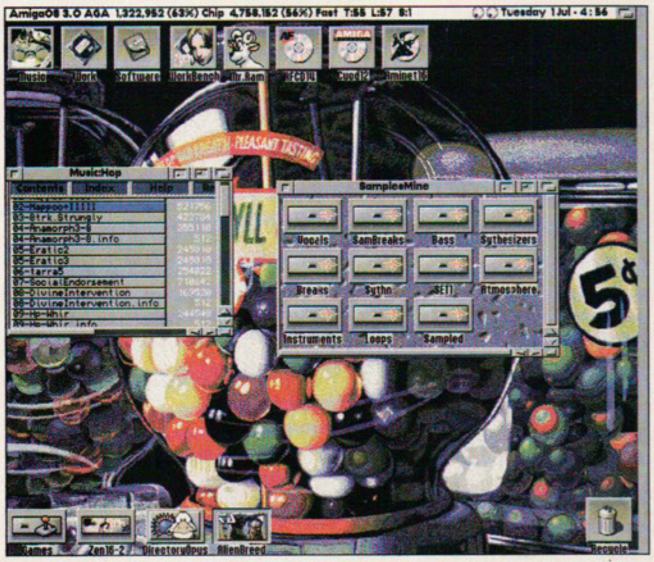


Lost in space, inside a massive burnt out vessel, with little time and less energy. Worse than that – you're a little grey blob.

Also included on this fledgling piece of software are some Workbench background patterns, a new system font, a fancy mouse pointer, and a script that counts your Workbench boot-ups.

Continued overleaf ➡

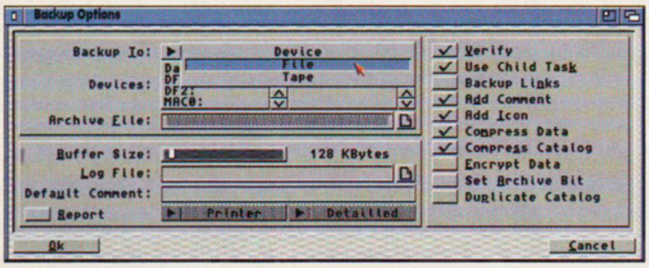
Coming to a screen near you fortnightly... each installment promises new drama.



Zen 16 is apparently going to be produced on a bi-monthly basis. Each issue will have a theme, and free programs will be included. Since at the present time the author's icon collection represents the bulk of the package, it will be very interesting to see how *Zen 16* evolves.

ABACKUP V5.11

By ....Denis Gounelle & Reza Elghazi
Ware ....Share
PD Library ....PD Power
No of disks ....One
Price.....................50p + 75p p&p

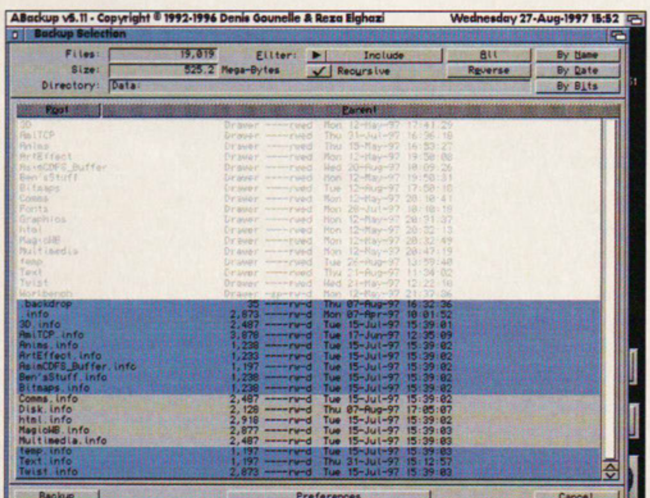


Hurrah! No more floppy-swapping for you...

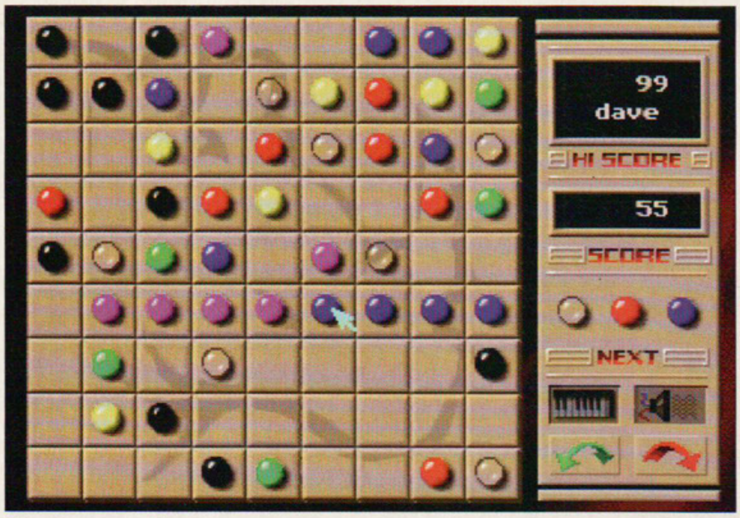
In days of old, backing up a hard disk was a chore that most Amiga owners would do at least once every few weeks. But in those days, hard disks were rarely more than around 60Mb in size, so backing up to floppy was still possible, although it involved huge quantities of disks and far too many swaps for comfort.

Nowadays, the typical Amiga hard disk tends to hold something in the region of half a Gb of information, and theoretically drives of up to 4.2Gb can be used. Ways of backing up such huge amounts of data include copying one important partition across to a spare partition (and possibly compressing the data in the process), or archiving everything onto a SyQuest cartridge or a Zip disk. *ABackup* can handle all these possibilities and more besides.

As well as dealing with standard AmigaOS partitions, *ABackup* can



You'd be hard pushed to find a fuller-featured back-up utility for the price of this nifty little program...



What do you get if you cross two Yugoslavians and a tube of smarties?

back up PC, Macintosh and UNIX ones too. It boasts impressive features not usually found in back-up programs, such as transparent support for high-density floppies, the option to cycle between several floppy drives containing double or high density disks, and asynchronous writing to multiple devices.

The program can be run in one of four modes, from either the shell or Workbench, with each mode more suited to a certain type of operation. For instance, in one mode the program could be left overnight to back up an entire hard disk to a removable device, whereas in another mode you could direct all operations via the Intuition interface.

As anyone who has ever suffered a hard disk crash will know, a decent back-up program is worth its weight in gold. Fortunately, in this case, peace of mind won't cost the earth; registration costs the equivalent of US$20 (just under £14).

LINEAE COLORIS

By ....Rhino
Ware...............................Licence
PD Library ....Arrow-Dynamic Software
No of disks ....One
Price ....£3.99 + 70p p&p

According to the accompanying blurb, *Lineae Coloris* was written by two Yugoslavian Amiga enthusiasts, who cite it as "a board game of strategy and skill based on the PC game: *Color Lines*".

The game is played on a 9x9 board, and the objective is to arrange similarly-coloured counters in lines of five. Each time a line is formed, those counters will vanish and your score will increase. Every time you move a counter without forming a line, three new counters appear in random positions on the board. The higher your score when you finally



Linear Coloris steals Connect 4's crown in a new take on noughts and crosses.

run out of board space, the better your performance has been.

Lineae Coloris might not look particularly exciting, but it's the sort of engrossing game which will earn its creators many friends. It is well presented too, with a clean and clear interface, crisp, colourful graphics, and a smattering of sampled speech. There's some slightly irritating music but fortunately this can be turned off at the click of a button.

The game is available in two flavours, one for AGA machines and one for older Amigas with at least a megabyte of memory, so if you decide to order this addictive puzzler then you will need to indicate which version you require.

TURNTABLES

By ....Alastair M Robinson
Ware..................................Share
PD Library ....PD Power
No of disks ....One
Price.....................50p + 75p p&p

When I was in my third year at junior school, I had a teacher who, besides being the most talented piano player I have ever encountered, was enormously influential in my academic mathematical career. At a quarter past nine every weekday morning he would have the entire class draw a ten-by-ten grid, and would then proceed to call out ten random numbers between two and fifteen which we would obediently write across the top and down the side of the grid. We were then given

PD selection of the month

HIPPOPLAYER 2.4

By ....Kari-Pekka Koljonen
Ware ....Share
PD Library ....PD Power
No of disks....................One
Price ....50p + 75p p&p

Although the likes of Intel and IBM have probably succeeded in convincing Joe Public that the multimedia computer is very much an invention of the nineties, we in the Amiga world know that ours was the first true multimedia machine. The Amiga has had excellent stereo sound capabilities since the days when 286 PCs proliferated, and it still stands up well when compared to the output of most modern PC sound cards.

The continued rapid expansion of the mus/mods directory of Aminet shows the enduring popularity of the Amiga as an amateur musician's machine. In a typical week, a phenomenal number of tracker modules are uploaded by creative Amiga users around the world. Other users can download them to learn tracking tricks, steal the samples, or simply to enjoy the tunes for themselves.

Although the now-aging *ProTracker* module format remains in common use, the *OctaMED* format is also widely used, as are an increasing number of flashy, sometimes PC-compatible formats such as *ScreamTracker3*. If a different program was needed to play back each of the myriad tracker formats, you would have to have so many programs on your hard disk that there wouldn't be room for any modules – hence the popularity of programs such as *HippoPlayer* and *DeliTracker* that can deal with a wide variety of module formats.

This latest release of *HippoPlayer* supports around fifteen file formats internally, as well as nearly another twenty through an external "player group" file. It coped easily with every module I could find to throw at it. It comes supplied on a single floppy disk, but must be de-archived to your hard disk before it can be used.

***HippoTracker* has a neat and intuitive Gadtools interface which makes getting at its many powerful features quite easy. The *HippoTracker* window is an AppWindow, so modules can be dragged and dropped into the playlist. At the click of a button, information about the tune currently being played, as well as fancy scopes and so on, can be called up in separate windows.**

***HippoPlayer* is the sort of program that you'll love so much that it will take up permanent residence on your hard disk. It is Shareware, but the registration fee is extremely reasonable – just £5 – so there really is no excuse for not registering your copy.**



Listen to the soulful sounds you've created at the helm of your Amiga with *HippoPlayer*...

several minutes to complete this tables square, multiplying the numbers on the horizontal and vertical axes to find the answer to write in each box. When pupils finished the one hundred calculations, they would shout out "Stop!", whereupon they would be told how long they had taken to complete the table.

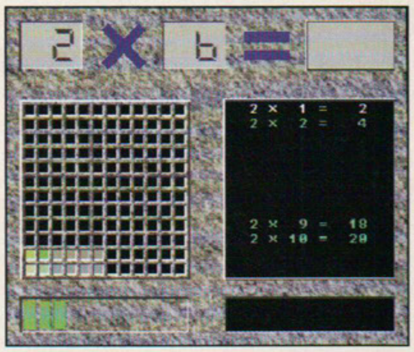
I wasn't bad at Mr MacArthur's tables squares, although I only occasionally broke the two minute barrier and I never came very close to beating my best friend's 1 minute, 47 seconds record. However, to this day I have never had to hesitate to recall a basic times-table calculation.

With all the hype surrounding the state of our education system these days, and perhaps as a lasting legacy of several governments' insistence that the "Three Rs" (Reading,'Riting and 'Rithmetic) should be more firmly stressed in our schools, there surely has not been a better time for parents to consider the various means at their disposal of helping their children learn. Among these, the home computer has an important role to play. After all, just think how many younger Amiga owners initially justified their parents' purchasing of their machine as being 'educational'...

Turntables attempts to make the learning of times tables an enjoyable experience. To a certain extent it succeeds, given that after booting up the disk I actually spent an entertaining few minutes playing all the way through this demonstration.

The demonstration version of *Turntables* only tests the user on the two, three, four and five times tables, presenting progress reports in the forms of graphs after each test. There are four difficulty levels, and the higher the difficulty level, the less time the user has to enter his or her answers. The game features a friendly interface and some very pleasant sound effects. The full version tests up to the twelve times table, and is available directly from the author for £5.

If *Turntables* has a flaw it must be its over-reliance on a child's quick typing skills. As a long-time computer user I had no great difficulty in entering my responses as quickly as



If you can't do this one, go and sit in the naughty corner...

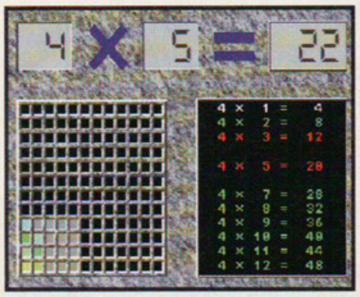
Continued overleaf ➡



Andrea's racked with guilt over all those bunked maths lessons – here we see her battling bravely with multiplication...



It looks super slick and will have you times tabling like a pro.



Er... no! Learn to multiply and work out how many vodkas you get with tenner...

TOP 10 PUBLIC DOMAIN TITLES

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2. Autoboot v4
3. Text Engine v5
4. Arrow AGA Utils
5. Arrow Archivers
6. Colonial Conquest 2
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8. MUI v3.8
9. Virus Checker v6.58
10. Starstrike 2000

Top 10 courtesy of Arrow-Dynamic Software • PO Box 7 • Dover • Kent CT15 4AP • Tel: 01304 832344

WHERE TO GET THE DISKS

Arrow-Dynamic Software
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Dover
Kent CT15 4AP
Tel: 01304 832344
email:
hadji@arrowpd.demon.co.uk

F1 Software
(formerly Saddletramps PD / 5th Dimension Licenceware / F1 Licenceware)
1 Lower Mill Close
Goldthorpe
Rotherham
South Yorkshire S63 9BY
Tel: 01709 888127
email:
phil@ware5d.demon.co.uk

(On August 1st, F1 Licenceware was taken over by 5th Dimension Software. The new company is called F1 Software, but the ranges produced by each company will remain separate for the time being. Products such as the Amos Compiler are still available).

PD Power
15 Lovetot Avenue
Aston
Sheffield S26 2BQ
Tel (mobile): 0374 150972
email: pdpow@aol.com

Other good PD libraries.

I thought of them, but small children could easily become frustrated in situations where they know an answer but can't enter it in before the strict time limit is exceeded. Having said that, *Turntables* does make times tables about as exciting as they could ever be, and so could prove an valuable educational tool for younger, computer-literate children.

JACKMAN

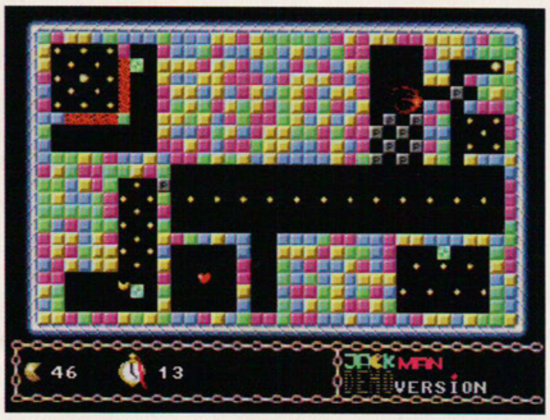
By.........*Marcus "Mopz" Johansson*
Ware...................................*Share*
PD Library ....*PD Power*
No of disks ....*One*
Price.....................*50p + 75p p&p*

Over the years there have been more *Pacman* clones than one would have thought possible, with every Freeware and Shareware author seemingly wanting to prove that he or she can inject something new into a well-worn theme. By attempting to add new depth to the gameplay rather than simply going for flashy graphics and sound effects, *Jackman* goes a lot further than many such efforts.

After you have been treated to a couple of slick opening screens and given the chance to input a password obtained during a previous playing session, it's straight into the first of the nine levels contained in this demonstration version of *Jackman*. It's an extremely colourful game and despite the small size of the sprites, the graphics are very detailed and well drawn.

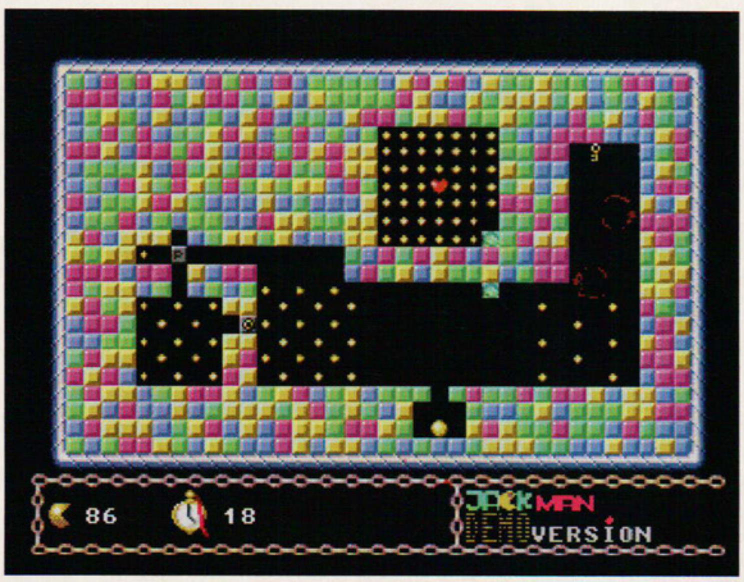
The game itself is described by the author as something of a cross between *Pacman* and *Boxman*, adding puzzle elements to the dot-munching action. Instead of being limited to a tightly-designed maze, *Jackman* can move quite freely around large areas of the screen. As you would expect, however, the familiar control method remains, whereby your sprite keeps moving in one direction until you move the joystick another way, or until *Jackman* collides with a wall or some other object.

Each level has a strict time limit within which *Jackman* must eat all the dots scattered around the screen. Often some dots are hidden behind locked doors, which can only be opened when *Jackman* collects the appropriate key. At other times dots are located in rooms which can only be reached by stepping into teleportation units, and in still other situations, blocks must be pushed in a particular way to enable dotular consumption to take place.



***Jackman's* got the munchies... the best Pacman impersonator ever set against a charming pastel backdrop.**

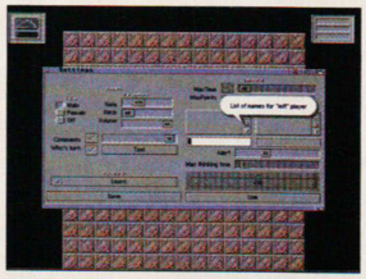
Although it can occasionally be just a little frustrating trying to control *Jackman* as precisely as is required, in order to progress deep into the game, this is a polished product which looks fully worthy of the £6 registration fee.



The music is bearable too, and it's rare that I can say that about a game featured in these pages.

TOSSWORD

By........................*Dmitry Mikhilov*
Ware...................................*Share*
PD Library ....*SaddleTramps PD*
No of disks ....*One*
Price.....................*80p + 50p p&p*


That computer's just far too clever – in need of some artificial unintelligence!

The problem with playing games like *Scrabble* against computers is that the machine can think extremely quickly, and never attempts to play a blinding move only to find that it is, in fact, illegal. It has the added advantage of being able to spot every word in the English language that its letters could possibly make. To a certain extent, programmers of such games would do well to program a little artificial 'unintelligence' into their creations, in order to make the game more life-like and therefore more enjoyable for the average player. At least we'd have a sporting chance.

Unfortunately *Tossword* does not seem to have any such adjustments, which makes playing the game against the computer a bit less fun than playing a fellow human being, (well, what did you expect?). It's an otherwise accomplished effort though, pitting the player against the Amiga or a friend in what is effectively *Scrabble* without double or triple word score squares.

Since *Tossword* was programmed by a Russian, the supplied Russian dictionary is considerably larger than the supplied English dictionary (20,000 words as opposed to just 7,000 – hey, you can always brush up on your Russian, right?). But *Tossword* does allow you to add new words to the dictionary, or nominate words to be added to the antidictionary – a collection of words which are not allowed to be used in the game.

If you have a friend handy, *Tossword* is an excellent way to while away a few hours. You'll need a hard drive to run the program, which uses *MUI* for its preference screens, through which it is possible to set winning scores, thinking time limits and so on – provided that you have the full registered version of the game, available for US$20.

Amiga Mice

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Pen Mouse £12.95
(ideal for CAD)
New Black Mouse
for Amigas £9.95



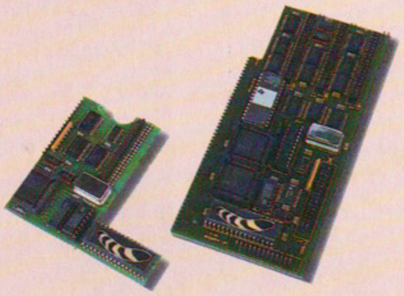
Ram Boards

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Winner of Gold Format Award in Amiga Format February 1997

Best pricing on CD ROM Drives & Hard Drives.

We can supply CD ROM solutions for ALL Amigas from A500 to A4000. We will match any genuine advertised price and also give four top titles free: Nick Faldo's Championship Golf; Syndicate; Pinball Fantasies & The Chaos Engine on top where we have to price match any product.

All our External IDE CD ROM Drives have built in power supplies (they do not draw power from your Amiga)
Different options to connect CD ROM drives to A600 or A1200

a) Use Internal IDE port with AlfaDuo if you have 2.5" Hard Drive (will be with full IDEFIX software).
b) Use Internal IDE port with Alfa-Quatro interface if you have 3.5" Hard Drive (will be with full IDEFIX software).
c) PCMCIA external interface option available.



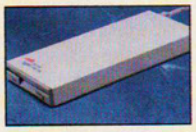
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12 Speed CD ROM for	£179.00	£149.00	N/A	£139.00
16 Speed CD ROM for	£189.00	£159.00	N/A	£149.00

*(for A500/A500+ Alfapower hard drive controller and Hard Drive is required). A1500/A2000 supplied with IDE controller & software. A4000 supplied with AlfaQuatro interface & Full IDEFIX software.

Floppy Drives

External Floppy Drive for all Amigas......£39.95



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Internal Floppy Drive A1500/2000 ...£25.00

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HARD DRIVES + BUDDHA CONTROLLER FOR A1500/A2000/A4000 ....1.2Gig £189.00

IDE 2.5" Hard Drives

IDE 2.5" Hard drives come formatted and installed with Workbench. Cable, screws, software and instructions supplied. *(please ring for availability)*

80Mb £69.00	340Mb £109.00
120Mb................£79.00	420Mb £119.00
170Mb.....£69.00 *starbuy*	540Mb £129.00
250Mb................£89.00	**810Mb ..£129.00 *starbuy***

IDE 3.5" Hard Drives

IDE 3.5" Hard drives come formatted and installed with Workbench. Cable, screws, software and instructions supplied. *(please ring for availability)*

850Mb.............£125.00	3.0Gig £200.00
1.2Gig £135.00	**3.8Gig...£229.00 *starbuy***
1.7Gig £155.00	5.0Gig Maxtor £329.95
2.5Gig £175.00	

"Amiga Format Gold Award August '97"

Memory

4Mb Simms.........£15.00	16Mb Simms ...£60.00
8Mb Simms.........£25.00	32Mb Simms...£140.00

Zip Rams *(suitable for A3000 & Oktagons)* every 2Mb £40.00

Miscellaneous Products

44pin 3 connector cable £5.00
44pin 2 connector cable £3.00
40pin 3 connector cable 90cm.....................£5.00
AlfaDuo 44pin to 40pin Interface & IDE cables...£20.00
AlfaQuatro 3x40pin Interface & IDE cables.......£39.95
DD floppy disks (50)
including multicoloured disk labels £13.00
DD floppy disks (100)
including multicoloured disk labels £25.00
3.5" Hard Drive Kit for A600/1200
+ Install software £15.00
Diskbox to hold 10 discs £1.00
Animal Jungle design and Dinosaur design £2.00
Optical Mouse Mat £5.00
2 in 1 Scanner/Mouse Pad
Can be used as a memo pad £3.00
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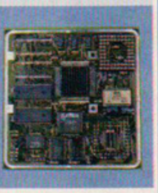
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Accelerator for A1200

Viper MKV 1230 50MHz plus SCSI interface
with 4Mb £159.00
with 8Mb £169.00
with 16Mb £199.00
50MHz FPU £35.00
Viper MKIV 42MHz + 4Mb
(not upgradeable) £80.00

Accelerator for A600



Viper A630 40MHz + 4Mb
(not upgradeable) £110.00
Viper A630 40MHz + 8Mb
(not upgradeable) £120.00

All prices include VAT. Please add £3.50 P&P for items under £30.00, £5.00 for items over £30.00, £8.00 P&P for Scanners, Speakers & Hard Drives, £10.00 courier for next day. Tax Free Export Orders Welcome.

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Workbench 3.1

AMIGA OS

Win a copy of Workbench 3.1 comprising:

* ROM chips to suit any Amiga
* all manuals and disks

Power Computing
have kindly given us
3 copies of Workbench 3.1
and if you'd like the chance to win one just answer this simple question:

"How many versions of Workbench (not Kickstart) have been released so far and can you name them?"

Please state what machine you have on your entry so that you'll get the right ROM chips
Send your answer on a postcard to:
Workbench 3.1 Competition,
30 Monmouth St,
Bath, Somerset BA1 2BW



Remember to print your answer clearly and put your own name and address on the card. Multiple entries are naughty and will be consigned to the bin!

RULES:

1. No employees of Future Publishing or Power Computing are eligible for entry.
2. No cash alternative is available.
3. The closing date for all entries is 14th November 1997.
4. Winners will be notified in issue 106 of Amiga Format and by post.

WIN! WIN! WIN! WIN! WIN! WIN! WIN! WIN!

In-depth reviews of hardware and software that you can trust

SERIOUSLY AMIGA



Ah, summer, glorious summer. When the software and hardware came in on time and we had things lined up for the coming months.

It's sad that the autumn is the bad time for mags in terms of having anything to review, because developers think they ought to wait for the Christmas market.

Even so, with renewed optimism in the shape of the latest Gateway 2000 statements, perhaps we'll see a whole line of new programs from big name software companies from other platforms in the near future.

Until then, content yourselves with some excellent reviews of stuff we HAVE got.

Ben Vost

AMIGA FORMAT'S REVIEW POLICY

is very simple. *Amiga Format* is staffed by some of the most experienced Amiga users in the world and what we say goes. OK?

WHAT OUR REVIEW SCORES MEAN

90+%	The crème de la crème. Only the very best, most versatile and effective products are awarded an *AF* Gold – the most highly prized rating there is.
80-89%	These products are very good, but there are minor flaws or areas that could be improved upon.
70-79%	Not a bad product but quite possibly one that needs a serious update.
60-69%	Average products with somewhat limited features and appeal. Products in this category tend to be flawed.
50-59%	Below average products which are unlikely to impress your mates or your wallet. Avoid.
40-49%	Overwhelmingly poor quality products with major flaws.
Under 40%	The absolute pits.

Aladdin 4D



A first look at the latest 3D package to hit these shores – *Aladdin 4D* v5. Ben Vost goes all vector graphics on yo' ass...

INTERFACE

- 100% Amiga style guide compliant
- *CyberGraphX* support
- Some Basic ARexx scripting
- AmigaGuide Help System
- Logically organised menus
- Thumbnail load/save requestors
- Font sensitive interface
- Real world coordinates
- Dolly, Truck, and Pan capabilities
- Infinite Surface Layering

Rarely can we say that we've seen a brand new 3D rendering package on our desks. *Aladdin 4D* has been around before but this is its first incarnation under the aegis of Nova Design.

Nova Design bought the rights to the package from the ailing *AdSpec Programming* people who first brought *Aladdin* to the market as *Draw 4D*. As you might assume from this name, it was originally designed not as a 3D rendering program, but as a cross between a CAD package and a structured drawing program. For this reason, the interface to Aladdin looks weird to start with and some of the tools don't work in the sort of way that people used to *Imagine* or *Cinema4D* might expect.

Unless you are a real 3D buff (no, not a *Real3D* buff, pay attention), it's actually pretty unlikely that you will have heard of *Aladdin* at all, let alone used it. Its American roots and awkward distribution meant that even magazines had a hard time getting a copy. But now, with Nova Design having a very capable distributor in Wizard Developments in this country, you should find it a lot easier to get your paws on.

Gaseous effects and lens flares are second nature to *Aladdin 4D*.

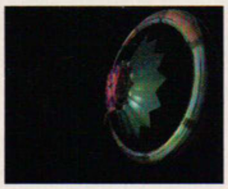
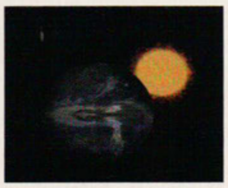
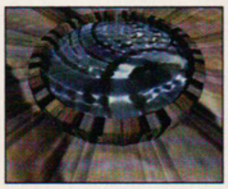
MODELLING

- Spline modelling tools
- Surface editing directly during modelling
- Easy to use lasso style zoom
- Extensive modelling tools including Extrude, Path Extrude, Lathe, Bevel, Mirror, Clone, Subdivide and many more
- PostScript file importing can load a subset of most Postscript files
- Draw freehand shapes, or trace over images directly
- Work in an unlimited number of layers/spaces
- Line of sight cutting tool allows complex object creation with ease
- Create organic objects with spline curves

Although *Aladdin* isn't as popular in the States as *Lightwave*, there are still some very talented people using it.

SPECIAL FEATURES AND EFFECTS

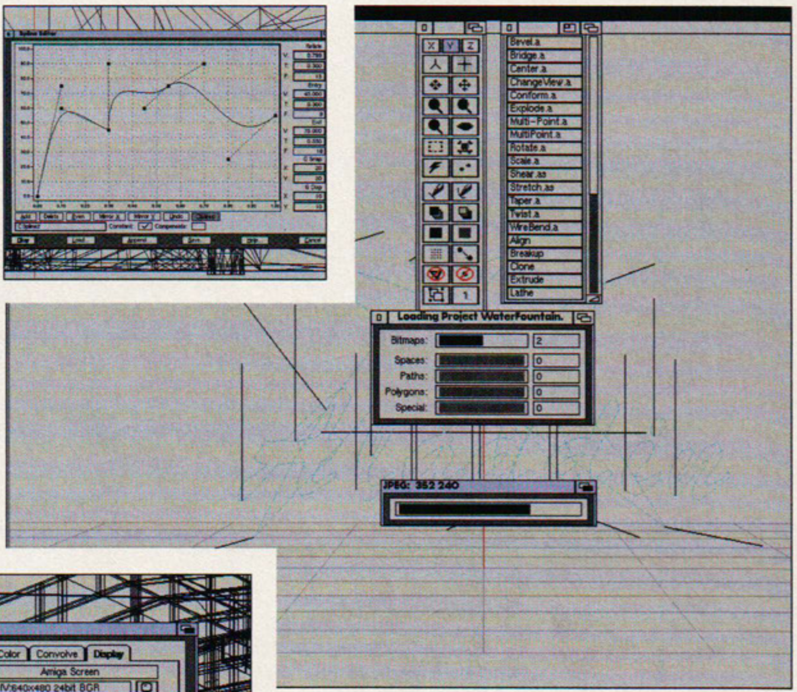
- Easy to use gaseous objects. A container is presented in which the actual density of space can be modified. Gases use attribute and texture lists as well as turbulence settings for dramatic effects.
- Wave sources are unlimited in number and have dual radii making it easy to imitate rings in water etc.
- Fountain particle system allows the creation of endless varieties of particle effects, from fireworks to smoke trails to falling snow.
- Textures. The most complete and easy to use texturing system available allows you to composite any number of bitmaps and/or procedural textures and specify when each should occur along with the strength and effect, including normal, bump, opacity, illumination, genlock and more. Procedural and bitmap sequences are supported. Fully animateable!
- *Lightwave*/Toaster compatibility includes *Lightwave* object import, Zbuffer compositing (*Lightwave* compatible), Toaster rendering, and framestore load/save.
- Buffer sharing allows connectivity between *Aladdin 4D*, *ImageFX* and any other software supporting MAGIC buffer sharing.



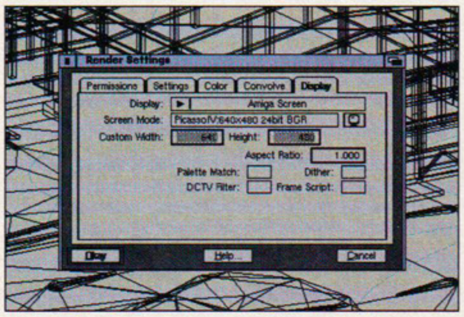

ANIMATION FEATURES

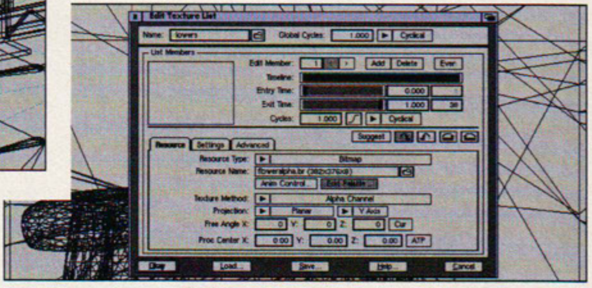
- Camera can use one or more targets which control zoom, tilt and direction and even pan from one target to the next, all under spline control.
- Animation of objects via paths and spline paths.
- Paths also control rotation, scaling, mechanical waves, deforms and instancing, and can be linked for complex motion.
- Timeline and 3D morphing animation techniques are supported.
- Control splines can be used to control all aspects of transition.
- Animate nearly all attributes of your scenes through easy to use envelope controls.
- Animate lights, lens flares, textures, objects, even camera attributes.
- Hierarchical motion paths and targeting abilities.
- Advanced motion controls including Spline Controls, Velocity, Shifting and Scaling.
- Enhanced lens flare controls with complete customisation and animation.



But why would you want to add yet another 3D package to your graphics arsenal? The answer lies in *Aladdin*'s special features. No other package on the Amiga yet gives you the options that *Aladdin* does when it comes to particle systems and gaseous objects. And unlike the current version of *Cinema*, not only do you get to play with wrapping bitmaps around your objects, but you can also use *Aladdin*'s procedural textures. They aren't nearly as complete as *Lightwave*'s, let alone *Imagine*'s, but they do provide a basis for texturing

Continued overleaf ➡





Clockwise from top: C-Splines for routers and motion paths; scene loading progress meter; texture editing window and the render settings window.

AND KERMIT SAYS...

We interviewed Kermit Woodall, head honcho at Nova Design, about his new baby:

AF: What's Nova Design's history with *Aladdin*?

KW: Our salesguy Bob was a user of Aladdin 4D and corresponded with other users who had told him about Greg Gorby's (the author) interest in finding a new home for it. Eventually Nova Design bought* Aladdin 4D *and we all began having fun with it. Tom rewrote the whole package giving it a completely new interface and a batch of new features. I've done some work with it to create a series of new advertisements that combine old photographs (manipulated in ImageFX) with 3D added by* Aladdin 4D. *The rest is the future.

AF: Why should someone choose Aladdin over one of the other 3D packages on the Amiga?

KW:* Aladdin 4D *is designed to be an excellent choice for beginning 3D artists. Its price is amazingly low, it's easy to use, and it has a fully integrated 3D modelling, rendering, and animation environment.* Aladdin 4D *is also full of cool stuff like volumetric gases, animated procedural textures, and real particle systems.

"Aladdin 4D is also full of cool stuff like volumetric gases, animated procedural textures and real particle systems."

AF: We understand that you have a Cyberstorm PPC. Will you be porting *Aladdin* to the PowerPC module from Phase5?

KW: There's a bit of a difference of opinions on the PPC, but we are interested in supporting it. We'll announce something when we're close to a real product release.

AF: Now that you've spent time making *Aladdin* conform to many of today's interface standards, what's next in terms of features for *Aladdin*?

KW: With the overwhelming response and sales of this release of Aladdin 4D we're still busy compiling suggestions from our new users. We have our own ideas for the next version that we're working on, but we do have a policy here that we don't discuss features of upcoming releases. Get back to us on this. You won't be disappointed – we're just beginning with Aladdin 4D!

AF: Where do you see Amiga graphics going in the next two-three years?

KW: With Amiga's new parent company, Gateway 2000 the future is looking really exciting. We've been in regular discussions with them for some time now.

We'd personally like to see the adoption of CyberGraphX, or something similar, as an official RTG standard. We'd also like to see CyberGL/OpenGL adopted with lots of hardware solutions for speeding up real-time, professional, 3D graphics.

Hopefully more standard graphics hardware components will also become available offering faster 2D and 3D displays.

With ImageFX and Aladdin 4D we're staying on the leading edge of 2D/3D software. ImageFX has been the industry leader in image editing and special effects across many computer platforms. ImageFX is regularly compared with SGI packages and Adobe PC/MAC packages like Photoshop, Premiere and After Effects. We've seen people keep their Amigas because they simply can't get the features we offer elsewhere.

Wizard Developments will be distributing Aladdin and it should sell for well under £199. Current owners of *Aladdin 4D* or *ImageFX* can also contact Wizard for special LOW upgrade and crossgrade pricing as well. Crossgrades will only be taken from ImageFX however. Call Wizard on: 0181 3031 800



EXTERNAL TOOLS/PLUG-INS

Aladdin 4Ds mature plug-in architecture gives Nova Design, Inc. and other developers, direct control over Aladdin 4D allowing them to add new features and functions such as motion tools, image filters and image processors, or new modeling tools.

Plug-ins included with Aladdin 4D are:

Align, Bevel, Breakup, Bridge, Center, ChangeView, Clone, Conform, DrawnoteRD, Explode, Extrude, Lathe, LOSCut, Mirror, PathEx, PntCntrl, Prim_P, Prim_Q, Rotate, Scale, Shear, SelectSAM, Spiral, SplineToPoly, Stretch, Taper, Twist, Wirebend and more!

Formats Supported:

Image loaders/savers for the following formats: IFF/ILBM (palette mapped and 24-bit formats), JPEG, and Framestore

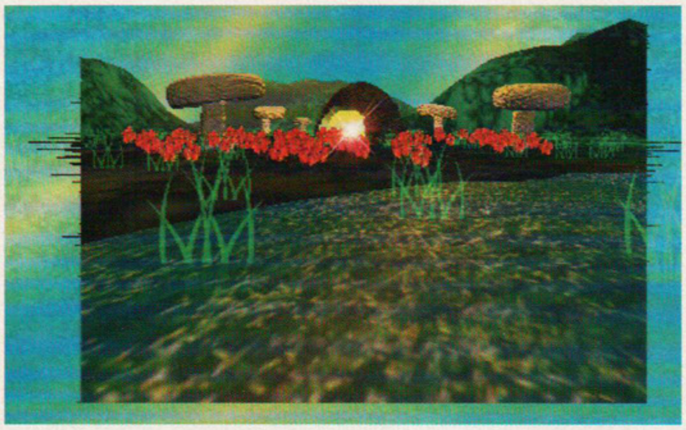
3D Object loaders and/or savers for the following formats: *Aladdin 4D*, *Lightwave 3D*, GEO, EPS, DEM, *Draw4D-Pro*, and *Draw4D*

your objects and you can use several layered textures at once to provide added depth to your objects.

At the moment, we've only got a set of disks and no manual, so a full review will have to wait until next month, but just from our first look at it, the program appears quite daunting, but

The bubbles in this scene were created using *Aladdin*'s particle system.

then the same can be said of many 3D packages at first glance – and indeed of *ImageFX* itself. It certainly isn't going to be as easy for the newcomer to 3D as say *Cinema4D* or *Lightwave*, but then again, it will be easier than *Real3D 2* or *3*. From first impressions, I would say that I would like to see a lot more visual feedback on operations – a better idea of what the procedural textures are going to look like, an easier way to configure particle systems and generally more on-line help in the form of a help bar for the toolbox commands. Also, although the program is style guide compliant, there were things that didn't seem quite right on my system. I found it extremely difficult to move the toolboxes around the screen, finally only managing it when I had *Aladdin* doing something else, like loading a new scene, and cycle gadgets that acted a bit flakey.



Fountains can be used for all sorts of things, including plants.

One thing that was impressive on the other hand was the speed of rendering. Complex scenes with lens flares, gaseous objects and particle systems seemed to take very little time to render at high resolutions, the '060 in the test machine notwithstanding, but it would be nice to see timing information for the render in progress, much like *Cinema*. Other things I noticed while playing with *Aladdin* included the ability to add notes to your scene so that you can keep track of object textures, or even explain how objects have been created, and the plug-in interface that allows tools to be added to the program by third parties. Lastly, in keeping with Nova Design's reputation for image processing, you can actually apply convolutions to your images while rendering them and *Aladdin 4D* is *Magic* compliant so it can exchange data with *ImageFX* without needing to save it to disk first.

I'm having fun playing with *Aladdin* and I look forward to being able to bring you a full review next month when I'll be able to go into its benefits and possible shortcoming in the kind of depth that you expect from *Amiga Format*. Until then, have a look at the pictures we have here and think about it...

LIGHTING/SHADING

- **Shading can be Facet, Gouraud or Phong. Other attributes are timelined so objects can change reflectivity, colour, transparency, hardness, etc. during the animation by spline controls**
- **Unlimited lights of any type**
- **Lights use attribute lists that can be animated to change colour and strength**
- **True photoreal soft shadows and user optimisable ray traced shadows**
- **Conic lights (Spotlights) with full controls and targeting**
- **Negative lights**

RENDERING

- **Fastest possible rendering available**
- **Multi-level supersampling antialiasing**
- **Full control at render time over render attributes and settings**
- **Motion blur with controllable passes**
- **Fully customisable lens flare and 3D flare objects**
- **Render 32-bit images in standard resolutions or in custom resolutions**
- **Generate photorealistic soft shadows**
- **Control light attributes including Light Type, Colour, Intensity, Falloff, Lens Flare, Shadow Options and more**
- **Standard and custom image resolutions up to 32,000 by 32,000 pixels**
- **Direct support of *CyberGraphX*, DCTV, Toaster, Retina, *OpalVision* and standard Amiga modes including HAM8, 24-bit IFF and more.**



Even if you can't learn to play guitar, at least you'll be able to make one in this package. That's one up on Billy Bragg...

SYSTEM REQUIREMENTS

Any model Amiga equipped with at least a 68020 CPU and 68881 floating point math co-processor, 5Mb of memory and a hard drive. Workbench 2.1 or later. For best results, a 68040 or 68060 accelerator, 16Mb of memory, and a large hard drive are recommended...

Eyetech's Autumn Amiga Specials : Accel's from £68.95 - Forget '030/50's - get ~3 x the power with an 040/25MHz (19 MIPS) for just £159.95, 51 Mips '060/66MHz £389.95; A600 33MHz '030/MMU/FPU /standard simm to 32MB - £99.95; DIY-EZ-Tower from £99.95; 8-speed CDPlus £149.95; A1200 high speed serial port £46.95; 14.4K modems £24.95; SX32 from £149.95; RED=Price down , Blue=New product.

The All-New Eyetech EZ-TOWER

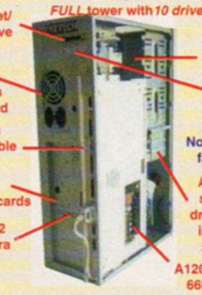
"This definitely one of the easiest solutions to building your own tower." John Kennedy, Amiga Format - July 1997

If you can use a screwdriver you could build your own A1200 tower system in less than half an hour!

It Couldn't be Easier!

- Remove the case top and keyboard ribbon cable *(No shield removal required).*
- Slot in the ribbon cable from the optional PC/ Amiga keyboard interface.
- Mount existing and new hard and floppy drives and CDROM units in the bays using the screws provided.
- Connect up the drives power and data cables.
- Clip the A1200 motherboard/base into the custom backpanel.
- Push on the power/HD/ FDD LED adapter and the A1200 power connector.
- Put back the outer case. Thats it! ...

Now You've Got Tower Power!



(*optional extras)



The A1200 EZ-Tower

NEW! Mk2 EZ-Tower with PSU - still only £119.95

DIY option - all parts/instrs provided - £99.95

EZ-Key A1200 adapter for PC & Amiga kbds- just push in the ribbon cable!	£39.95
7 x Zorro II slots expansion board - including 5 x PC ISA slots for GG2 bridgeboard, ethernet etc. *With accelerator pass-through.* Fits most towers.	£179.95
Single Zorro II slot adapter for graphics card - *with accel pass-through.*	£99.95
- as above with built-in *EZ-Key* i/f (Both available August 1997)	£134.95
EZ-DF0 A1200 tower DF0: diskette drive with faceplate and interface	£34.95
Squirrel adapter for EZ-Tower - with int HD/CDROM & ext Centr's 50w skts	£19.95

Collection, fitting and delivery service- Please ring

...Or buy a CDPlus unit (below) and get an EZ-Tower for just £99.95*

(*as an alternative to the regular CDPlus case)

SX32Mk2 & SX32Pro *Internal* Expansion for the CD32

STOP PRESS!!!

The Award Winning SX32 Pro is now even more affordable

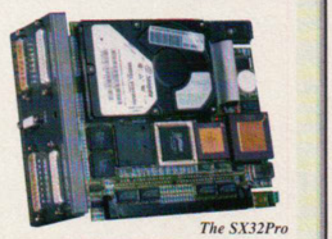
The SX32Pro and SX32Mk2 add ...

- 40 or 50MHz '030 MMU CPU and FPU socket (33Mhz FPU socket only on the SX32Mk2)
- Simm socket for up to 64MB of 32 bit fast (60/70ns) RAM (up to 8MB fast (70ns) RAM on the SX32Mk2)
- Buffered IDE interface for internal 2.5" hard drive *and* second hard drive, SyQuest, Jaz *or even 8 speed CDROM* (optional extra on the SX32 Mk2)
- Sockets for RGB video (23 pin), VGA video (15 pin), Parallel port (25 pin), Serial port (25 pin), Floppy disk port (23 pin)
- Jumper-selectable for PC or Amiga keyboard input (external adapter on SX32Mk2)

... to the CD32's existing mouse, joystick, keyboard, audio, RF, composite video and SVHS ports.

What do the reviewers say?

Amiga User Int'l	*"95% - Definitely Recommended"*
Amiga Computing	*"90% - A Dream to Use." Blue Chip Award*
Amiga Format	*"96% - Absolutely Top Notch" Gold Award*



The SX32Pro

SX32Mk2 - sale price - £149.95

SX32Pro-50 - sale price - £299.95

Genuine Amiga 89-key compact keyboard £34.95

SX32 floppy, hard drives 20MB-1.8GB, RAM - *Please ring*

All models include full pictorial fitting instructions,WB3.0 & utilities on CD and 'Click-and-Go' hard drive installation diskette

Special CPU purchase — Last few - SX32Pro-40SE. A Special Edition SX32 Pro with 40Mhz '030EC processor (no MMU) - *Just £249.95*

AMIGA HEALTH WARNING

If you have recently fitted - or intend to fit - an IDE/ATAPI CDROM to your A1200 *(other than an Eyetech CDPlus unit)* **without** a buffered interface then your Amiga is in risk of serious damage arising in the future. The A1200 - unlike A4000's and PC's - has *NO* internal IDE buffering. On the A1200 the IDE interface connects *directly* to the A1200 processor & custom chips *AT ALL TIMES* which have insufficient output to drive more than one IDE/ATAPI device (and only then on a short data cable) for any sustained time period. We are now making the Eyetech *Mk2* 4-device buffered interface available separately for use with other kits and D-I-Y CDROM installations. At only £39.95 it is a small price to pay to preserve your Amiga's health.

"A buffered IDE interface is essential to avoid overloading of the A1200's IDE port when adding extra devices" - John Kennedy - Amiga Format - July 1997

The Top-Rated Eyetech *CDPlus* for the A1200

- 8- or 12/16- speed external CDROM unit in quality, CE-approved case with heavy duty PSU
- Leaves trapdoor free for accelerators / memory expansion and the PCMCIA slot free for digitisers, modems, samplers etc
- Option to add additional HD's, CDRoms, SyQuests, *IDE Zips*, Jazs, SyJets, ATAPI tape streamers etc powered from the CDPlus unit
- Comes with special Eyetech *'060-compatible* Mk2 4-device EIDE buffered interface board - easily fitted in minutes with no cutting/drilling (Note that IDE CDROMS *must never* be directly connected to the A1200 without a buffered interface - ask any qualified electronics engineer!)
- Gold plated audio phono sockets at rear (CD+ only) and front panel headphone socket and volume control



The CDPlus and SyQuest EZ135 drives. The IDE Zip Drive is the same size as the EZ135

Amazing Value — 8-speed - *only £149.95*

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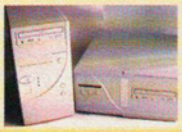
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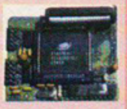
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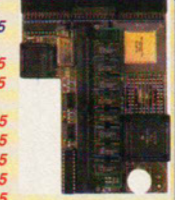
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A Standard A1200 is rated at 1.3 Mips. All measurements from Sysinfo

Memory : 4MB - £18.45; 8MB - £29.95; 16MB - £54.95; 32MB - £99.95

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DrawStudio 2

A new version, but what added features can DrawStudio offer? Nick Veitch examines whether it's time to go back to the drawing board.

One thing that Macintosh owners have always been able to say is that their machine, largely thanks to programs like Adobe Illustrator and Aldus Freehand. Until DrawStudio came along, the Amiga actually only had one structured drawing program of note, Professional Draw from Gold Disk, which sadly fell into disrepair.

you can now run DrawStudio properly on a 24-bit graphics card for a start

It is gratifying then that MUI-based DrawStudio is being regularly updated. There has already been a 1.1 release, and now this version makes it up to 2. It has to be said that there isn't really another ".9" of stuff in this new version, so don't feel you have to rush out and upgrade until you find out what the latest version has to offer.

NEW FOR 2.0

And what exactly is that? Well, the major feature is proper 24-bit support. This means that you can now run DrawStudio properly on a 24-bit graphics card for a start. Paradoxically, this can be faster than running it in 256 colour mode on an AGA machine, because a graphics cards chips are usually somewhat faster than the DMA-restricted circuitry of the Amiga.

Being able to view the image properly is handy, but I have to say that you wouldn't want to have it turned on all the time. One good reason is that things quickly become very confused, especially if you are using lots of blends and you have complicated objects. Part of this is the unavoidable consequence of having complicated objects, but DrawStudio doesn't help matters much by picking strange highlight colours. If you are working in detail on a piece it becomes pretty mandatory to use the wireframe mode, or at least greyscale.

Although in greyscale mode the system still reserves colours for the windows and requestors (the standard blue/white etc.), your highlight is still black,white or a shade of grey – a trick missed there I'm afraid.

The 24-bit rendering is good though, given a pretty accurate idea of what the finished object will look like when printed. The blends are particularly well displayed, Another small change is the screen update. Thankfully, now when you move an object, only the area immediately affected is refreshed, rather than the whole screen, which is a major blessing. Screen refreshes are

WHAT IS STRUCTURED ART?

The difference between your normal graqphics files and a picture drawn in a structured art package is more or less the same as the difference between a standard bitmap font and the scaleable fonts you can use on the Amiga.

A standard ILBM graphic is essentially a bitmap. It is so many pixels wide, by so many pixels high, and so many pixels deep (for the colour information). This is all very well, but it is limited to a particular size. In the same way that a bitmap font cannot be reasonably used at four times its original size, neither can a bitmap picture.

The activity most affected by this is printing. A picture may look fine on your screen, but your screen is only 640 pixels wide (probably). The average screen resolution is around 70-80 pixels per inch. On a laser printer, the output is 300 dpi. So your full screen image will take up just over two inches on a printed page. If you try and make it any bigger, the picture just begins to get blocky.

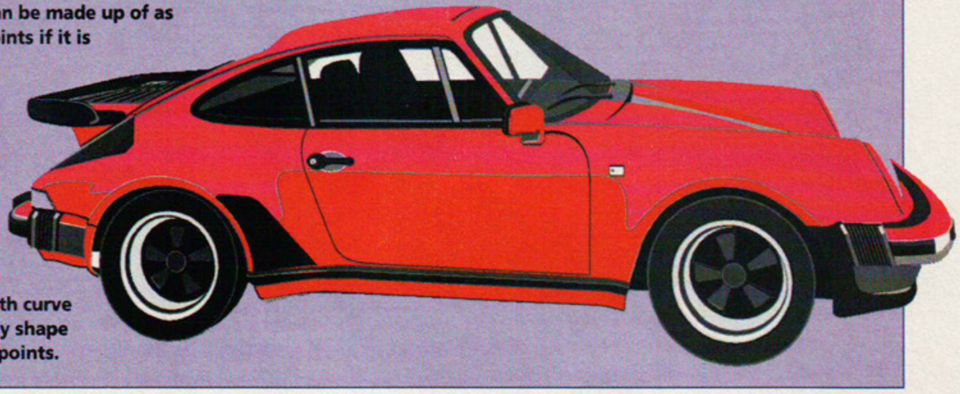
A structured art image file, such as the DR2D format often used on the Amiga, doesn't actually contain a picture at all. Rather, it contains the instructions on how to draw the picture. This means that the picture can be scaled up or down to any size, without any loss of detail. When printed out, it is automatically "drawn" at the highest resolution of the printer.

Of course this means that the tools and methods you use to draw a structured picture are quite different to those you would find in a normal paint package. In DrawStudio, like most structured drawing packages, most objects are lines or curves. Either way the line or curve has a few attributes, such as thickness, line colour and a fill colour (for filling in large areas).

A curve can be made up of as few as two points if it is turned into a bezier curve. A point on a bezier curve has a position and a vector expressing direction. Altering this vector can express a smoth curve of virtually any shape between two points.



The picture above looked okay on screen, but when printed out looks terribly blocky. Below, this picture came from the same piece of clipart. As it is a structured image, it can be used at any resolution.



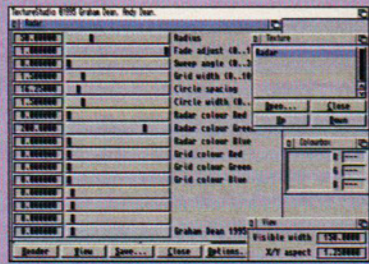
slow, because the software has to calculate which bits of the image are visible (as structured objects are allowed to overlap each other).

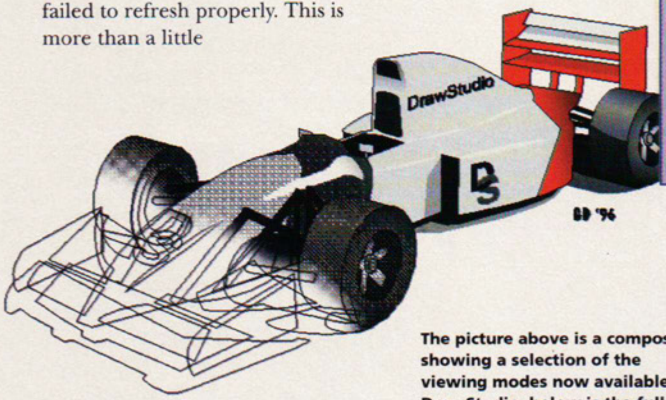
Unfortunately, this can also be a problem with graphics cards. On the systems we tested the software under (A2000/060/Spectrum, A4000/040 and A3000T/060/PicassoIV), the graphics cards had problems with the screen refresh. Essentially, in 24-bit mode, every time a menu was used, the area behind failed to refresh properly. This is more than a little annoying, because there is no "redraw" button or menu item, so you have to force the screen to refresh by moving the image around or changing the screen depth again.

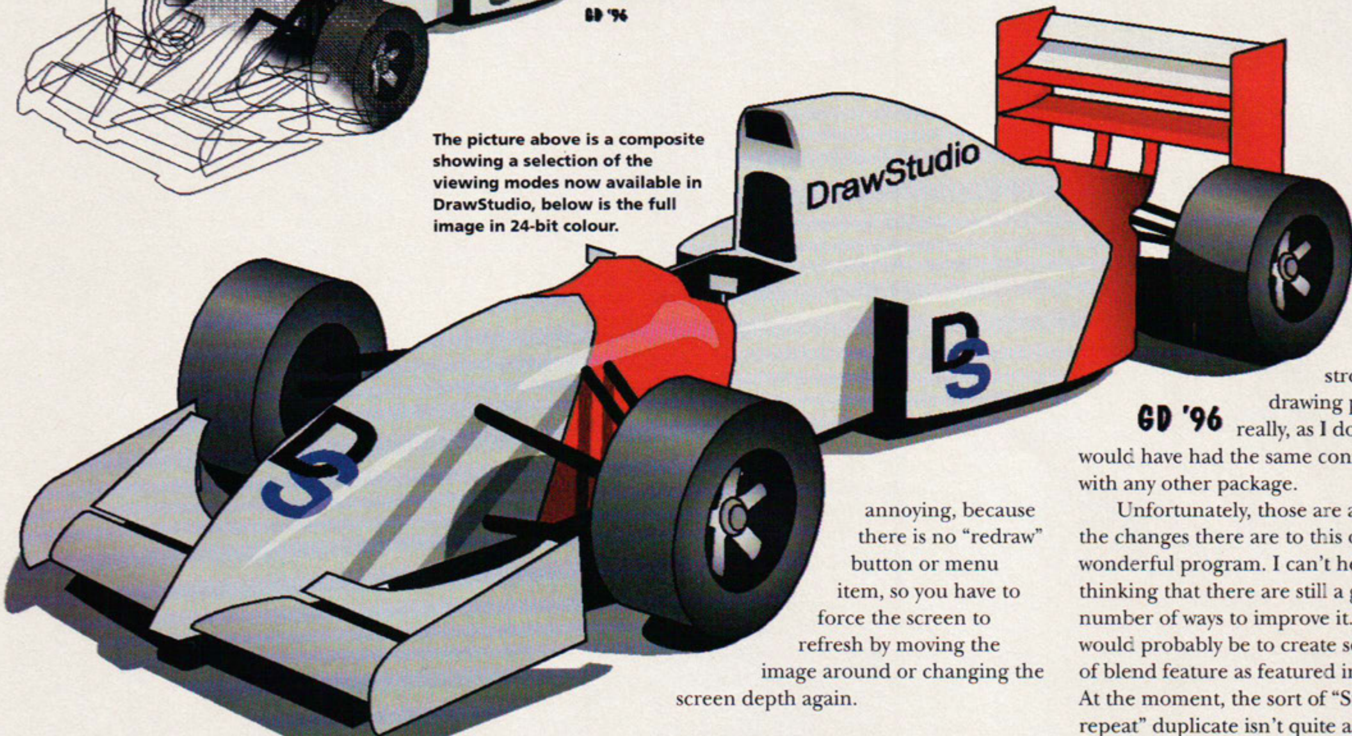
ALSO INCLUDED

The CD version of Drawstudio also includes registered version of Andy and Graham Dean's other graphics programs, ImageStudio and TextureStudio. The former is a better than adequate image processor, with a host of interesting filters, whilst the latter allows the editing and rendering of Imagine-style textures.









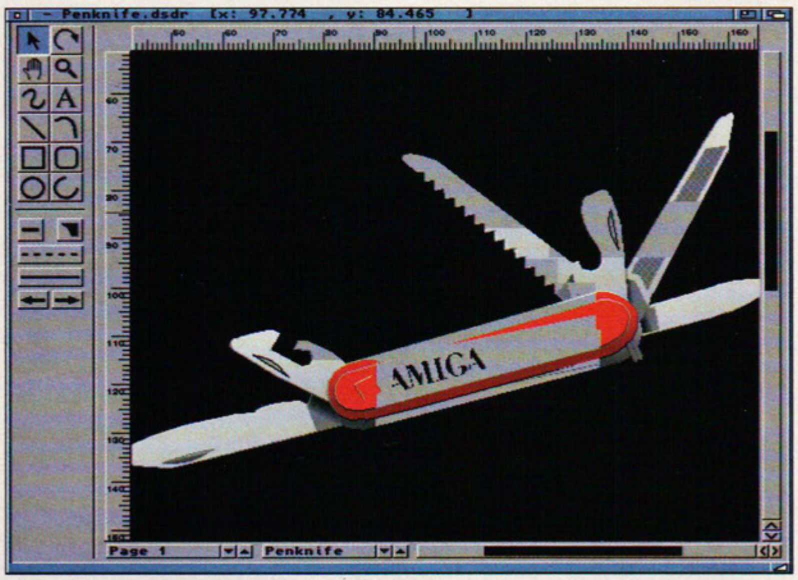
The picture above is a composite showing a selection of the viewing modes now available in DrawStudio, below is the full image in 24-bit colour.

OUTPUT

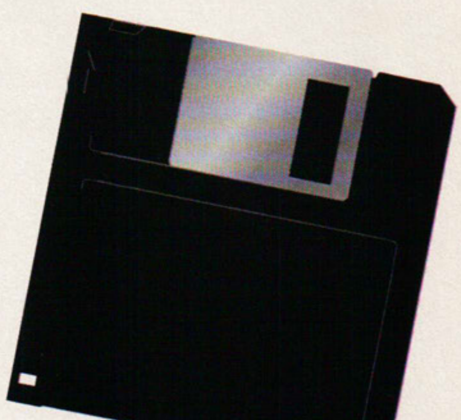
To go with the 24-bit display support, DrawStudio now also supports 24-bit printing, through the latest version of TurboPrint. This is really a necessity, as there is no point being able to generate and display excellent 24-bit structured graphics without the ability to print them out. For a lot of small DTP work, like posters and flyers, it would be perfectly reasonable to construct them entirely in DrawStudio, without the need for loading the art into a DTP package first. This is unusual in a strcutured drawing package really, as I don't think I would have had the same confidence with any other package.

Unfortunately, those are about all the changes there are to this otherwise wonderful program. I can't help thinking that there are still a great number of ways to improve it. Firstly would probably be to create some kind of blend feature as featured in Pro Draw. At the moment, the sort of "Step and repeat" duplicate isn't quite as flexible as the ability to morph between two different shapes.

Continued overleaf ➡



On a graphics card, glitches can occur when using menus. the grey bits in the image above came about from using the shareware commodity Magic Menu.



I created this example myself to show how structred art can be useful. This disk can have a label slapped on the top, then used at any size throughout a publication such as Amiga Format.

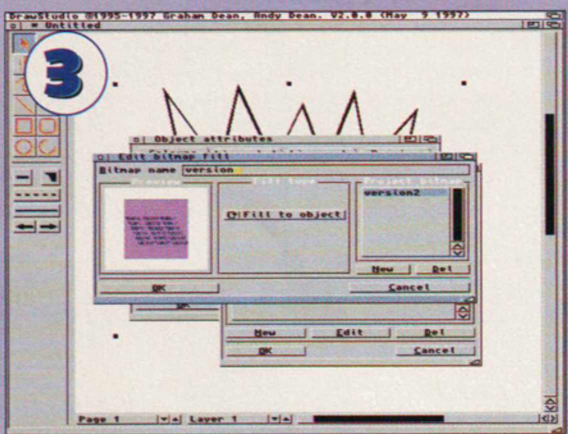
MAKING A LOGO IN DRAWSTUDIO 2



To start with, you will need to choose a font and type in your text. Here we have then warped the text with the perspective effect and cloned it in the background to give it a pseudo-3D look. A red line colour picks out the edges.



Most text-based logos look best on some sort of background. In this case we have used the energy saving ARexx macros to create a "Flash". This can then be rotated and stretched to fit nicely around the text. You could write your own scripts to create any number of useful shapes.



The flash box needs to be filled with a colour. Instead of just using a boring flat colour, we have decided to use a bitmap background image. It is a bitmap created in Drawstudio, and is just some text saying "version2" in dark blue on a purple background. Mmmm



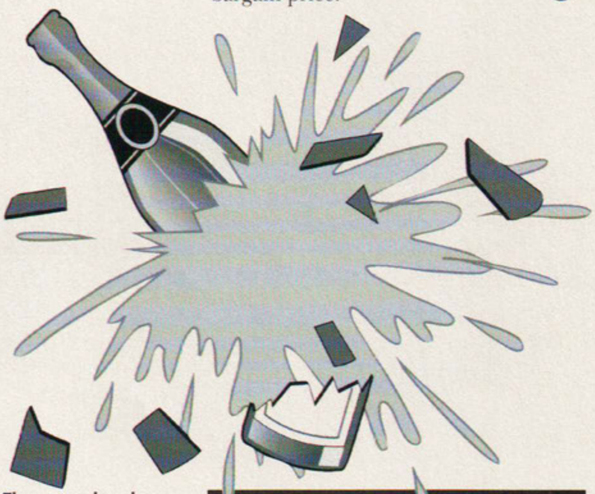
As you can see, the final result is much more effective and eye-catching than just some flat text on its own. This logo can now be saved out and used in other DTP packages, or used within DrawStudio to create an advertisement or press release.



Otherwise the object attributes are very good, with a wide selection of different fills, and an excellently executed gradient fill facility. The translucent colours are indispesible for creating highlights. But there are no new drawing features at all, which is a shame, there aren't even any additional ARexx scripts. In a way, it is quite cheeky to call it 2.0, but as the upgrade price from the previous version is under a tenner, I think we should let them off (but if you don't have a graphics card or decent printer, it's not worth the bother). To buy it for the first time on CD will cost you a tad under £50, but for that money you do also get ImageStudio and TextureStudio thrown in, which isn't bad.

I hope that it won't be too long before we see version 2.1 (or possibly 3, who knows) with some of the finer points of the software updated.

Until then DrawStudio is still the best structured drawing package to invest your money in, and now at a bargain price.



The examples above are typical of the structured clipart available, and which can also be easily created using DrawStudio.

Distributor: LH Publishing 01908 370230
PRICE: £49.95 CD, £34.95 Floppy (£9.99 for v1.1 upgrade disks)
REQUIREMENTS: WB2, 68020, 3Mb RAM

SPEED: ●●●○○
Redraw speed has improved.

MANUAL: ●●●○○
Detailed and easy to read.

ACCESSIBILITY: ●●●●○
Some features still need more work.

FEATURES: ●●●●○
There is a lot here, and 24-bit support is pretty good overall.

VALUE: ●●●●●
CD version is excellent value.

OVERALL VERDICT:
Although there aren't many new features, graphics card owners will definitely want to pay the upgrade price. Still the best.

94%

Scanner software head-to-head

Ben Vost looks at the low-cost Epson flatbed scanner and the two packages that can get it working with your Amiga.

Scanning is rapidly becoming a much cheaper business. When I bought my first colour scanner – the Sharp JX100 (which was only 18-bit and A6 capable), it cost me the best part of £450. These days, Amiga owners look enviously on PC ads offering 24-bit flatbeds from companies you've never heard of for only £250. However, we can now fight back thanks to Power Computing and Eyetech. They are offering their drivers for the diddy little Epson GT-5000 scanner which is available for just £249.95 from Power Computing. The question is, which software is going to be better for you?

IT'S HARD TO START WITH

But first the hardware. The Epson GT-5000 is the latest in a long line of Epson flatbeds and is currently the cheapest. We have reviewed their scanners in previous editions of *Amiga Format* (Epson GT-6000 *AF38* 98%, Epson GT-6500 *AF44* 97%) and as you can see, they scored very well. This new model is at least half the cost of the two we reviewed and doesn't skimp on any features. It also has a nice clean-looking case design which is significantly smaller than its predecessors. Like its predecessors it's a parallel-based scanner in its default configuration, but if you use *ScanQuix* it is available in a SCSI version. However, it is not clear at this time whether Power will sell the SCSI version, nor whether they will charge you more for it.

The scanner is designed for SOHO (small office/home office) use and doesn't support a transparency unit – not a great loss to most people, I'm sure. Its optical resolution is a plenty sufficient and fairly standard 300dpi, but with interpolation you can raise that algorithmically to 1200dpi, but watch out for memory use at that resolution. Scanning speed is pretty good and the scanner is much quieter in operation than the previous two models mentioned with much less of the "graunching" noise associated with high resolution scanning.

More importantly it has a "3D" scanning head allowing you to scan objects with more depth to them than pieces of paper. The light from the scanner doesn't extend very far – the pictures of Andrea prove that – but it's still great for scanning things like keys and the like, or for special effects. All round then, the GT-5000 is a significant improvement on its predecessors, but offers nothing new over either model already mentioned.



Epson scanners have always had a well-deserved reputation for quality and this model certainly doesn't change that.

Continued overleaf ➡

HOW BIG IS BIG?

Pixels are a great unit of measurement for screen resolution work, but they mean little to the layout people here who work in inches or millimetres. This of course means that they are going to require an extra measurement – that of dpi or pixels per inch. This equates directly to the dpi you use to scan pictures in, but not the dpi that your printer will output which is why it has a different name.

Even so, since most Amiga people recognise dpi as the defacto standard for scanning, we shan't be adding more standards in and confusing the issue. From now on, read dpi for dpi if you're a bod with loads of professional layout experience, and if you're like the rest of us, then just don't worry about it. Either way, it's easy enough to understand that a 300 dpi scan of a picture exactly an inch square will consist of 300 x 300 pixels or 90000 pixels altogether. How big that image will be in memory is also easy to work out, if you've a head for maths.

Let's start with greyscale images. We'll take our example one inch image at 300 dpi. Without adding anything extra for memory buffers or the amount of memory you'll need to run the scanning program, that image will take exactly 90000 bits of memory, times by eight for the number of bits in a 256-colour greyscale image, then divided by eight to get bytes, then divided by 1024 to get a kilobyte value. Got that? Look it's easy. Because you have to multiply by eight then divide by eight you may as well miss that step out and from there it's simplicity itself to work out that our mythical inch square picture scanned at 300 dpi in greys works out to ever so nearly 88k. For true colour images things are slightly more complex.

A 24-bit image means that each pixel consists of eight possible levels each of red, green and blue. This means that our calculation for memory goes as follows: 90000 bits of memory, times by twenty four to get the colour values, divided by eight to get a byte value, divided by 1024 to get a kilobyte value. Like the previous equation, you can simplify by multiplying by three instead of multiplying by 24 then dividing by eight, and thus, the sum works out at about 263.5k. Here are the sums in any easier to understand fashion:

GREYSCALE IMAGE
size of image in pixels / 1024
COLOUR IMAGE
size of image in pixels x 3 / 1024

If your software doesn't give you an image size in pixels, then the size of the image in pixels is just a function of however big your picture is in inches, divided by the dpi setting for your scanner.

Remember that some software requires an additional buffer, but these figures will give you the raw image size in memory before you save your images. Obviously if you save our 1" picture as a JPEG there is no way it will be 263k on your hard disk, but it will take that amount of memory when you want to display it.

PowerScan Professional

Buy your Epson GT-5000 from Power Computing and you will be given the opportunity to purchase *PowerScan Professional* for an additional fifty quid. This is Power's long-running scanner software and users of previous scanners from Power should feel quite comfortable using it. However, this pedigree also makes *PowerScan* feel quite old-fashioned and perhaps it is time that it was updated. It isn't very happy working on a graphics card screen (when we tried it, scanning then scanning again caused the machine to crash) and the programming techniques used are not very flexible. The manual that comes with *PowerScan Professional*, on the other hand, is very nicely written and laid out and certainly helps you get to grips with the less friendly software.

PowerScan Professional isn't without its benefits. It has a very nice feature in 1-bit dropout. This basically works by only using the strobing list of your choice when scanning. By default this will be the white light, but this feature allows you to choose to use the red, green or blue light. This means that you can scan a black on red document as though it were black on white because the red light from the scanner will be fully reflected back, giving white pixels.



An all-in-one layout, reminiscent of earlier versions of *ImageFX*, means that it will feel familiar to a lot of readers, but it is also limiting in these days of graphics cards and higher resolution displays.

"The manual that comes with PowerScan Professional is very nicely written..."

It also has rudimentary image editing and processing functions, but you may well be better off using your paint package for this.

In conclusion then, *PowerScan Professional* is a nice enough piece of software but old-fashioned, poorly programmed and expensive.





The 3D scanning head of the GT-5000 means that you can get some very weird effects from scanning Andrea's face or a cassette tape.

Distributor: Power Computing
01234 851500
PRICE: £49.95 (version 4)
REQUIREMENTS: Hard disk, memory

SPEED: ●●●○○
Not bad, but the interface doesn't feel fast.

MANUAL: ●●●●○
Excellent.

ACCESSIBILITY: ●●●●○
Easy to install, but not friendly in use.

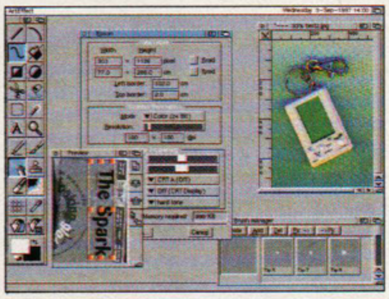
FEATURES: ●●●○○
It offers image processing and pixel editing but these aren't really needed.

VALUE: ●●●○○
Too darn expensive for what it does

OVERALL VERDICT:
It's okay to use, but it feels very old-fashioned.

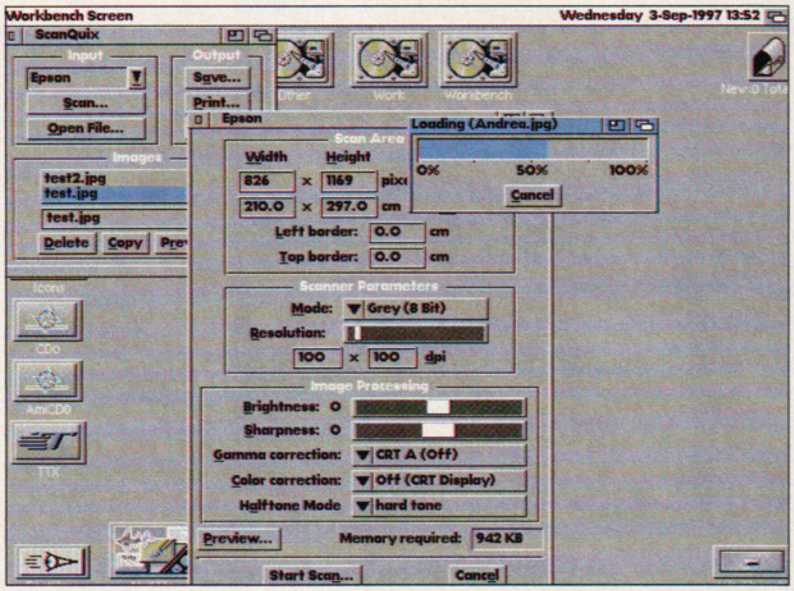
73%

ScanQuix



ScanQuix has a multithreaded interface (right) at home on any screen type. On the left you can see the *ScanQuix* plug-in for *Art Effect* which allows you to scan directly into the art package.





ScanQuix, on the other hand, is a modern piece of software available from Eyetech. Not only does it support several different makes of scanner, it can also work with parallel, serial and SCSI-based models making it far more versatile than *PowerScan Professional*. Its main interface is just a window which can open on Workbench or any other screen and it doesn't open windows until they are required. In a nice change to the norm, *ScanQuix* has a remove option in the installer so you can get rid of it if you choose. Also, *ScanQuix* gives you direct drivers for other pieces of software including *ADPro*, *Art Effect* and *PPaint*. This means you don't have to run more programs than necessary.

"ScanQuix is easy to use and pretty intuitive. The ARexx port comes as a nice bonus."

On the downside, while the manual for this version is in English, it betrays *ScanQuix*'s German origins and, like *PowerScan Professional*, there is no online help. *ScanQuix* doesn't handle datatypes when loading images, although I'm not sure I understand why you would want to load images into your scanning package anyway. But these are pretty minor niggles since *ScanQuix* is easy to use and pretty intuitive. The added ARexx port comes as a nice bonus, especially since it means that programs like *PageStream 3* that don't have a plug-in API can still use the scanner directly through ARexx.

ScanQuix can also print your scans out directly and, in fact, if that's all you need to do, you can run a separate program called *PhotoCopy* designed specifically for this purpose. *ScanQuix* itself supports both *TurboPrint* and *Studio* for its output and the settings are carried across to the vastly simplified *PhotoCopy* program which only has four visible settings (magnification, brightness, number of copies and whether you want it for text or photos).



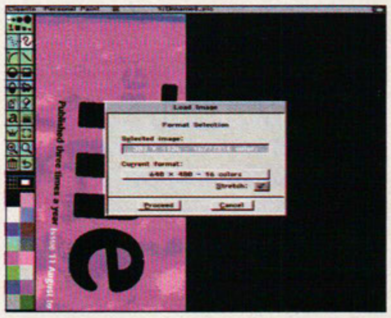
If you fancy scanning 3D objects, make sure they aren't reflective unless you want something like this multi-coloured psychedelic keychain as a result.

There's another couple of ancillary programs with *ScanQuix*. The first is a direct to disk program that takes as small a chunk of memory as possible and when it does the final scan, the data is written directly to your hard drive without having to sit in memory first meaning that those A4 scans you were intending doing at 300 dpi on your 6Mb Amiga should pose no problem at all.

The second is *ScanQuix Prefs*. This one probably won't get used often, but it allows you to set up various different scanner drivers and their settings.

ScanQuix is multithreaded so you don't have to wait for it to finish saving an image before you start trying to display another or get information on them. It's also nice to see that the program will allow you to have several different scanners attached to your Amiga at the same time. You can even switch between them without setting up loads of details.

ScanQuix is a lovely piece of software. Like *PowerScan Professional* it is overpriced, especially when you consider that the version that Eyetech supply is solely for the Epson flatbed, but if you can afford it, it is easily the better of the two pieces of software.



Here you can see *PPaint's ScanQuix* loader about to start scanning a new image.

Distributor: Eyetech 01642 713185
PRICE: £59.95 (version 3)
REQUIREMENTS: Hard disk, WB3.x, memory

SPEED: ●●●●●
The multithreaded nature of this app means that it's very fast indeed.

MANUAL: ●●○○○
Very poor and there is no ARexx documentation.

ACCESSIBILITY: ●●●●●
ScanQuix is extremely easy to use.

FEATURES: ●●●○○
The PhotoCopy program and program drivers are a nice addition.

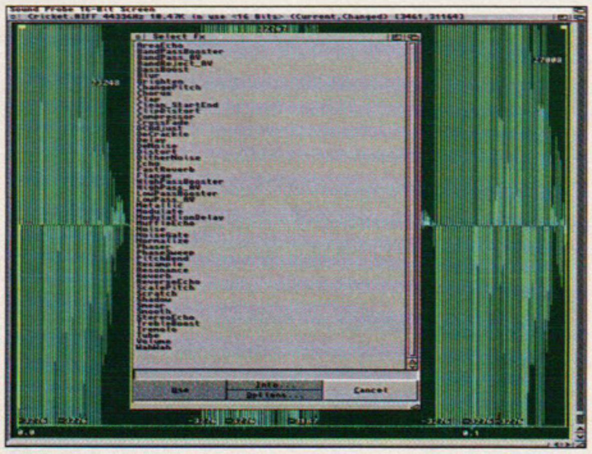
VALUE: ●●●○○
Still too expensive.

OVERALL VERDICT:
Excellent piece of software.

90%

SoundProbe

CD quality, 16-bit sound editing for the price of a double album? John Kennedy can't wait to provide a sample.



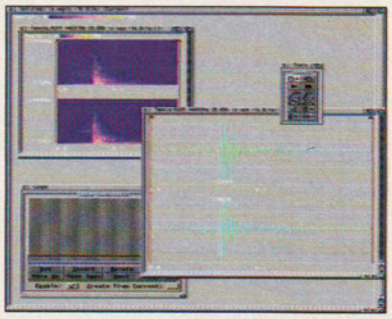
If you can't find the effect you want in this list, well, just wait – some more will be along in a moment.

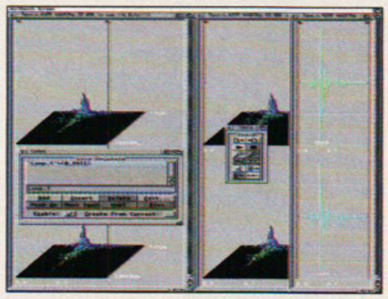
The Amiga could well be about to witness a re-birth in the audio stakes. Not only have we seen new standards and new hardware (the AHI feature and Prelude review in *AF102*), but at last the Amiga has outgrown the hardware limitations it was born with, with advances in hardware and software pushing the old 28kHz 8-bit limits to a more civilised CD quality 44.1kHz, 16-bit level.

Even HiSoft are getting in on the act, releasing a brand new sample editing program called *SoundProbe*. HiSoft are no strangers to making noise on the Amiga, not least for their Aura 12-bit hardware, and so it was with a fair bit of excitement that the Amiga was once again hooked up to the mixing desk.

As you might hope, *SoundProbe* goes out of its way to support as many different pieces of low-priced sampling hardware as possible: generic parallel port samplers, Aura, and Clarity can be used simply by selecting a menu option. More expensive Zorro-based audio hardware, such as the Prelude card, can be supported if it conforms to the new AHI audio card standard. The lack of direct support for systems such as Delfina, Toccata and Mastro isn't as big a problem as you might expect, as we'll see in a moment.

Compared to the usual run of sound sample editing software, *SoundProbe* is special for three main reasons. First of all, it's the most Amiga-friendly looking sound software I've seen: it runs perfectly on any display card, including the Cybergraphics system, which makes for some very pretty graphics displays. A far cry from the hacker coded copperfests of the early days.





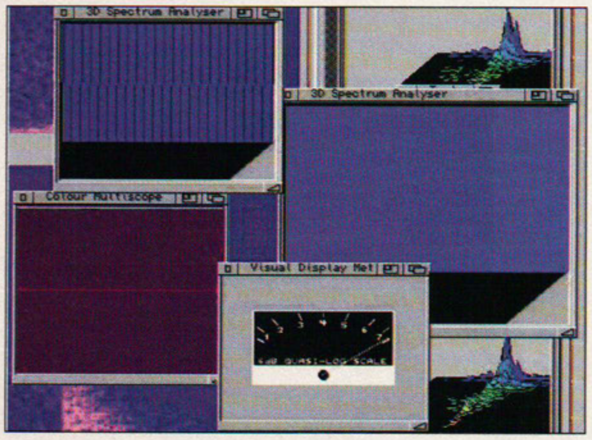
You can open as many windows as you have screen real-estate to use them. You can even open on the Workbench if you think that will help.

Secondly, it's a 16-bit system, which not only means it can process sound files with greater accuracy, but also that it can support 16-bit samplers and file formats. Excellent news for serious audio hardware fans, and those who may feel the need to share files with their PC brethren

"It's the most Amiga-friendly looking sound software I've seen: it runs perfectly on any display card."

Finally, *SoundProbe* is expandable. Everything, and boy do I mean everything, is in the form of software plug-ins. This means that the playback mode, special effects, loading and saving formats and even display styles can be added to at some later date. For example, we're promised a compression file system later in the year which will plug-in and cut the space needed to save files.

This expansion-minded system backdoor is exactly how other hardware will fit into *SoundProbe*'s world. Either *SoundProbe* drivers for specific cards will be written, or AHI drivers for the hardware will appear. In either case, *SoundProbe* should eventually be able to talk to everything which makes a noise and connects to the Amiga.



Windows overboggle continues, with multiple monitor windows to check your incoming sound.

SUPPORTED FILE FORMATS

***SoundProbe* will support the following file formats used to save and load samples.**

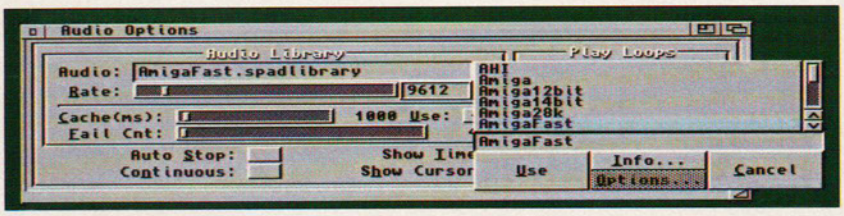
8SVX The standard 8-bit IFF audio format. Supports loop.

AIFF Stores audio in 8-bit and 16-bit, stereo when needed.

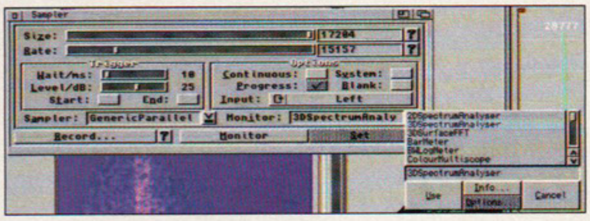
WAV PC's favourite, 16-bit mono or stereo.

AVR New one to me.

RAW Data with no special formatting.



Select your audio hardware, including Paula (standard Amiga sound) and the latest AHI hardware.



Soundprobe will let you sample directly into the program, so you can throw all your other software away.

SPECIAL EFFECTS?

The filters and modules included as standard are far from shoddy too. The filter collection offers a mouth-watering collection of ways to butcher your samples, including echoes, flanges and crossfades. Many of the filters will operate in real-time mode, so you can use your Amiga as a digital effects box.

Editing files is as flexible as you could want, with sections on the screens highlighted by dragging the mouse. You can then cut and paste, create loop sections or apply effects. The looping is particularly useful: for example, you might want to store a song as a sample. Using loops you can split the song into sections, repeating the chorus as needed. This saves disk space.

Speaking of disk space, if you have a fast and empty hard disk you can sample directly to it, bypassing any memory limits. Perfect for recording large audio tracks prior to burning them to recordable CD-ROM.

BEST EVER?

Before *SoundProbe* can be classified as the ultimate in sample editing systems it needs only a few additions. First and foremost, an ARexx port would be very useful, making it possible to carry out some extensive batch processing effects. On more than one occasion I've needed to convert more than one file in a similar way.

Although there is an extensive battery of effects, a "stretch" effect is currently lacking. Being able to alter the length of time a sample plays without altering the pitch is important to musicians who often need to tweak percussion loops.

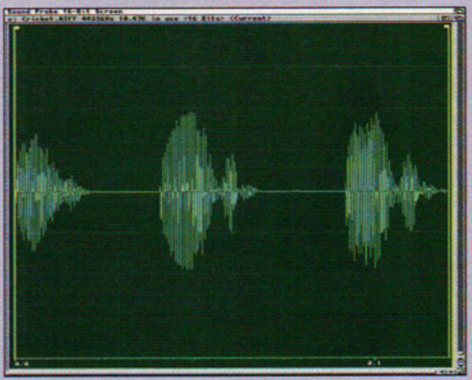
Last on the list would be support for MIDI sample dumps: quite an exclusive requirement, but the software which came with the Clarity sampling hardware managed it, and I was half expecting to see it in a menu somewhere. Shame, as being able to boast MIDI would have put it on a par with only a few programs on any platform.

Whilst I'm whinging, the user interface is a little lacking in places. Although it claims total style guide compliance, some of the requestors are totally non-standard (and very ugly) and the menus can be confusing: why do you need to visit the Display menu to choose your sample hardware? And why did a perfectly ordinary WAV file re-trigger playback of itself at random, and then crash the computer when saved in IFF format? Hopefully, at least the last of these whinges will be looked at in more detail very soon.

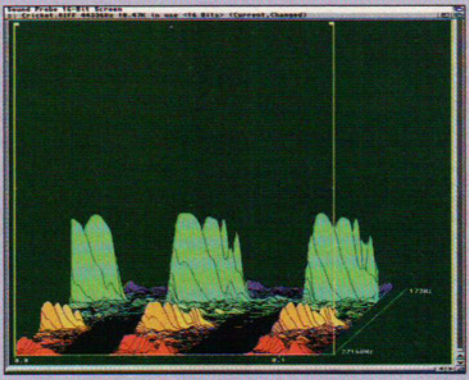
The presence of these omissions and bugs don't prevent *SoundProbe* from being the software you must consider seriously upgrading to for all your sample manipulations. No, it's not the best sampling software the Amiga has ever seen, but it does work with a wide range of hardware, perform 16-bit processing and can be expanded almost ad infinitum. It also has the support of one of the best Amiga companies in the business, and perhaps most importantly, costs a fraction of the price of similar software on the PC or Mac. The bottom line: you would have to be mad not to try it.

LOOK AT IT THIS WAY...

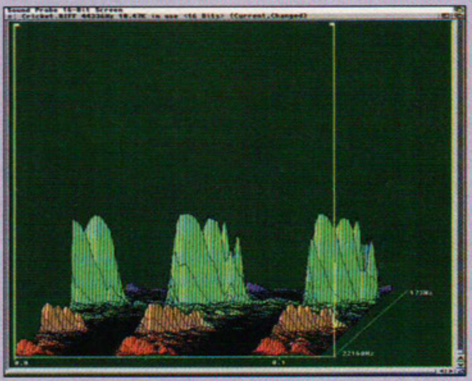
***SoundProbe* features various ways of looking at the same data. If you happen to have an Amiga with a graphics card, you can see all the colours in a nice big screen. Ordinary Amigas will work too of course, but will need to use less colours to avoid waiting around all day. If you choose, you can have the same sample displayed in all possible ways at once.**



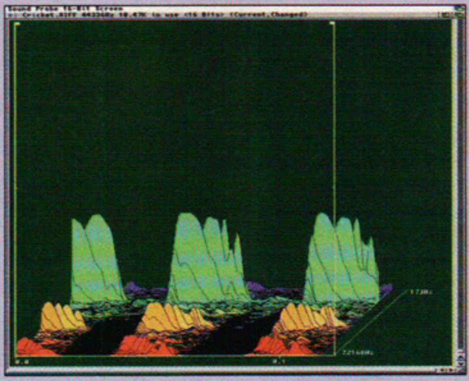
A simple (and very familiar) line drawing. The easiest way to cut and paste sections.



A two-dimensional frequency map. Ideal for performing voice print analysis in the comfort of your own home.



A three-dimensional frequency analysis, using Fast Fourier Transforms to measure the energy present at each frequency in the sample.



The same as the FFT display, but with less lines for some very technical reason I'm sure.

DISTRIBUTOR: HiSoft 01525 718181
PRICE: £39.99
REQUIREMENTS: Amiga with 68020 or better, 4Mb RAM, WB3.x, hard disk
RECOMMENDED: Fast 1Gb hard drive, graphics card

SPEED: ●●●●○
Nippy editing and filter effects. Some display modes take a few seconds to draw out the pretty coloured graphics.

MANUAL: ●●●●○
HiSoft documentation.

ACCESSIBILITY: ●●●○○
Comprehensive plug-in nature can be confusing as can silly menu system.

VALUE: ●●●●●
A bargain for the price. PC owners pay hundreds for these features.

OVERALL VERDICT:
A good program, plenty of features but not the total audio stunner expected.

82%

AWeb-II 3.0

John Shepard returns to fill us in on *AWeb-II 3.0*, hoping that it won't be updated too soon after his review...

Last year I reviewed *AWeb-II 2.0*. Three days later an update to *2.1* became available, fixing a lot of what I'd complained about. Version *3.0* fixes even more complaints – and adds a few new ones.

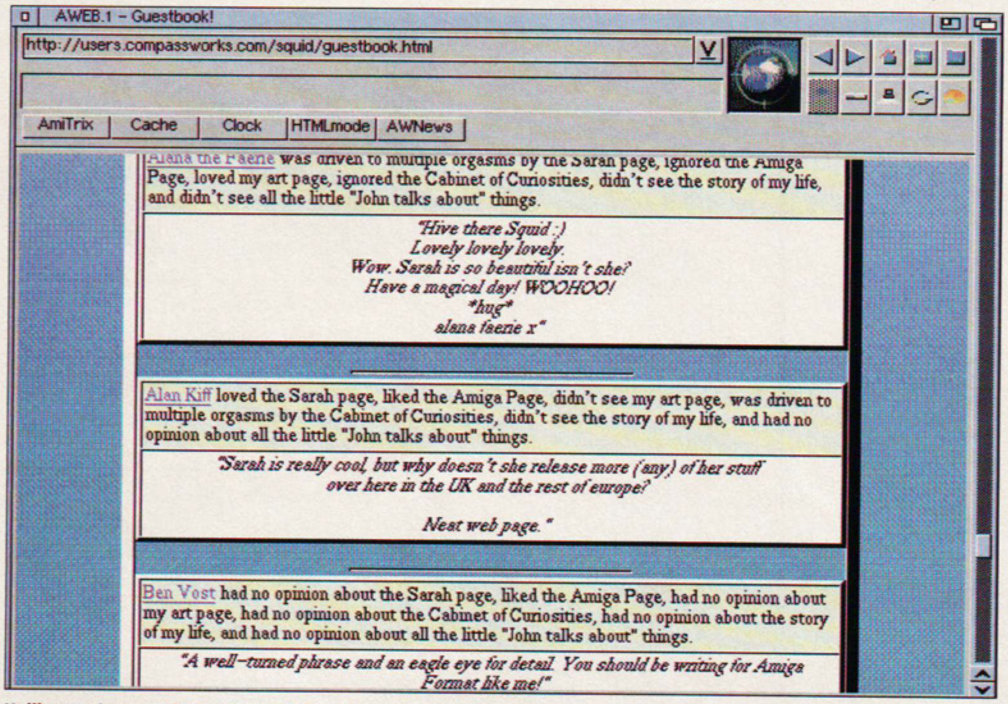
AWeb-II 3.0 is compatible with "modern" Web pages – you'll see about 95 per cent of what users of other platforms see. You won't see any Java or ActiveX or Shockwave – no Amiga browser yet supports them – but you will see almost all the other page elements supported by *Netscape Navigator 3.0* and *Microsoft Internet Explorer 3.0*.

Tables are supported, text can "wrap around" a graphic that's been aligned to the left or right, table cells can have background colours and even frames are fully supported now.

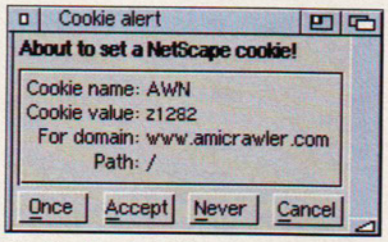
Many sites use "cookies" to remember who you are when you visit again and support for these has been included. Even "refresh" is here – so a page can be programmed to automatically reload itself after a certain number of seconds.

STILL BROKEN

But some problems remain unfixed. I'm starting to hate *ClassAct*, the GUI extension kit used by *AWeb*. It's better than *MUI* in some ways, but it lacks a lot of *MUI's* polish. If you're in the middle of loading a page, don't bother clicking on anything – it might not respond for several seconds or will only partially respond. I can't tell if this is a *ClassAct* problem, *AWeb*, or the Amiga OS itself. The documentation mentions unusual slowdowns on accelerated Amigas using high-colour screens – but I saw these



Unlike previous versions, *AWeb-II 3.0* works well with tables, coping well with background colours for cells and other advanced options.



Like the other Amiga browsers, *AWeb* lets you decide whether you want a cookie.



Finished pages look fine, but remember that since *AWeb* uses datatypes, there is no progressive decoding of images.

DECIPHERING THE SETTINGS

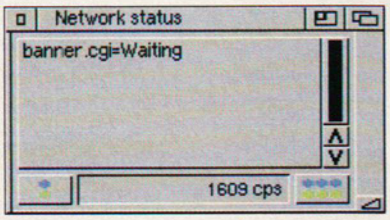
AWeb-II 3.0 **spreads its configuration options out across five different control panels. I kept forgetting what was where – so here's a quick guide, in case you do too.**

Browser Settings: HTML mode, blink speed, background sounds, fonts, link colours, viewers.
Program Settings: Screen mode, screen palette, paths, hotlist behaviour, external programs for viewing source etc.
GUI Settings: User buttons on/off, contents of ARexx menu, user-defined buttons, popup menu.
Network Settings: Image loading, start page, cookies, external programs for email etc, proxies, browser cache.
ClassAct Settings: *ClassAct's* preferences to let you change the look of the GUI.

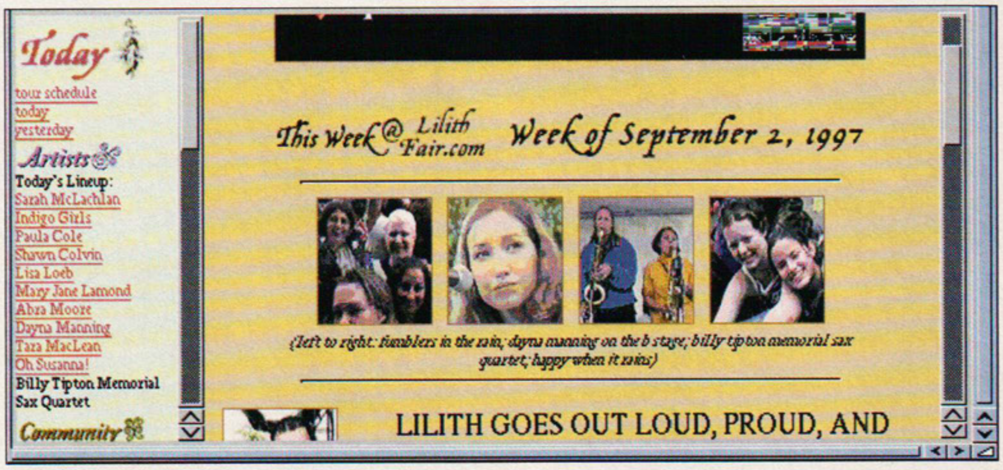
"AWeb-II 3.0 is compatible with "modern" Web pages – you'll see about 95 per cent of what users of other platforms see."



Ugh! No wait, it's supposed to look like that – introducing the Microsoft web site.



AWeb's Network Status window keeps you informed about your progress on the web.



AWeb now handles frames, but still can't handle animated GIFs internally.

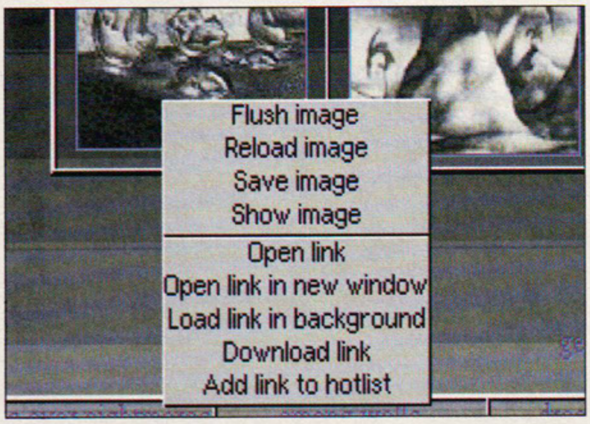
problems running in 16 colours too.

AWeb still uses datatypes. While handy for allowing a browser to display pictures in any supported format, datatypes are sluggish, they eat chip RAM like there's no tomorrow (there's only 2Mb to go around) and you don't see the image at all until the datatype has finished processing it. This means animated GIF images must load in their entirety, but then you only see the first frame frozen in time.

AWeb-II 3.0 supports "plugins," and a plugin for normal and animated GIFs

> **"Aweb is a powerful, competent browser that's ready to play in the big league."**

is available on the Web. Strangely, the plugin doesn't actually use *AWeb* to download, so all the graphics on a page start loading at once and don't appear in the status window. Even the plugin



See *IBrowse*? *AWeb* can do context-sensitive pop-up menus too...

uses way too much chip RAM and unlike *2.1*, *3.0* doesn't show a "broken image" icon if it fails to load an image for memory reasons.

AWeb still lacks a real hotlist menu – it displays your hotlist as a Web page, which is sluggish and unattractive and unlike every other Web browser. *AWeb* still doesn't properly handle the "selection" object in forms – for a selection item with only a few items, it displays it as a cycle button and for more than a few, it displays it as a scrolling list that's about four times taller than the page designer expected, thus wrecking the appearance of certain pages. Even *ALynx* understands these are supposed to be "popups."

PLENTY TO PLAY WITH

On the upside, though, *AWeb* has some impressive features for those who like to tinker. It has an extensive ARexx command set and provisions for letting you run AmigaDOS commands from inside a Web page. And it seems to download files much faster than other browsers – including earlier *AWebs*. There is also a "popup menu" that lets you directly save links to disk, or view pages or images separately and this is extremely handy.

On the whole, *AWeb-II 3.0* is a grand leap forward. It's customisable, it's programmable, and Web pages look good (which is the important part). If you don't like *MUI* – and don't mind *ClassAct* – this is your browser. And if you're not sure, there's a free demo available for download so you can try before you buy. Speed and memory usage are still big concerns – but *AWeb* is a competent, powerful browser that's ready to play in the big league.

DISTRIBUTOR: Blittersoft 01908 261466
PRICE: £29.95
REQUIREMENTS: Workbench 3.x and a hard disk

SPEED: ●●●○○
Fast downloads but the program sometimes "ignores" you.

MANUAL: ●●○○○
15 pages plus "online" docs.

ACCESSIBILITY: ●●●○○
Easy to use, but why five different settings pages?

FEATURES: ●●●●○
Some good extras.

VALUE: ●●●●○
Matches up to the competitors.

OVERALL VERDICT:
Speed it up, fix the non-responsiveness and cure the memory problems.

81%

Workbench

Just lie back on that comfy couch and relax. Expert AF counsellor Graeme Sandiford is here to resolve problems with your hard drives and printers. Book an appointment at: Workbench, *Amiga Format*, 30 Monmouth Street, Bath, Somerset BA1 2BW.

AGA VS VGA

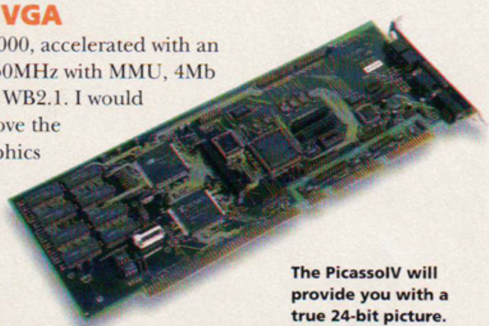
I own an A2000, accelerated with an '030 board 50MHz with MMU, 4Mb of RAM and WB2.1. I would like to improve the A2000's graphics and am thinking of buying a PicassoIV board.

1. Will this give me some sort of AGA compatibility? Will I be able to view AGA pictures, and other HAM pictures that are only available to AGA machines, or will I have even better graphics?

2. Will I be able to have VGA emulation with the Picasso card or do I have to install a VGA PC card?

3. Where do I find Electronic programs for the A2000 – do you know of any store?

Ricardo J. Gordon S. Freitas
Madeira, Portugal



The PicassoIV will provide you with a true 24-bit picture. If you're into graphics it is well worth the money.

1. A Picasso card won't give you true AGA compatibility, as AGA includes obscure graphics modes and extra sprites. Instead it will give you a true 24-bit picture, which will be displayed extremely clearly on a SVGA monitor. If you play a lot of games, you'll find that the AGA-compatible ones won't work: otherwise the new Picasso graphics modes are superior to any native Amiga mode. Upgrade to WB3.1 for the full effect.

2. Yes, you should be able to emulate VGA and SVGA modes. Using a PicassoII with a PC emulator (such as PC Task*) is a lot better than using native Amiga modes. It's not lightning fast – the emulator still depends on the 680x0 to do the grunt work – but it's a great deal better.*

3. There are several electronic design programs available, my favourite of which is SPICE*. You should be able to find them on the Aminet, or from PD libraries.*

DELETED FILES RETURN

1. The ENV drawer in my fast RAM is cluttered with unwanted files and tooltypes etc, from programs no longer on my hard drive. Can you tell me how to get rid of them? The usual methods don't work: they appear to go, but when I reboot they come back again.

2. When I replace the boring old RAM icon with a nice new one from *New Icons* or *Magic Workbench*, the same thing happens – after a reboot, the old one is back on the screen again.

3. Just to tax your brain a bit more, when playing music CDs, some tracks play far too fast and others work just fine. Is it my CD player (2x) or the CD music software?

Stephen Bucknall
Penrith, Cumbria

1. No matter how many times you delete them from ENV: they will return. The answer is simple: every time the Amiga is booted it copies the files from ENVARC to ENV. So to delete them permanently, delete them from ENVARC and then reboot.

2. The RAM icon is a different matter. To make sure your own nice icon is used instead of the system default, you will have to add a line to the user-startup sequence, to copy an icon you have previously saved to the right location. Here is the command you need:

```
copy >nil: hd0:ram.info to
ram:disk.info
```

This assumes you have created a suitable icon, and saved it as "ram.info" to the hard drive hd0:.

TOWER POWER?

HEAT OF THE MOMENT

I own an A1200 with a 33MHz FPU in the trapdoor expansion slot. My problem started when I bought the trapdoor expansion. Every time I boot up for the first time, it 'hangs' about twenty minutes later. I try a soft boot and it 'hangs' again, but ten minutes later, then five, then sometimes it doesn't boot at all. I was convinced that it was the PSU with all the extra add-ons. So, I bought a 240W PSU. Unfortunately, this did not cure the problem.

1. I am now convinced that it's the RAM expansion overheating. Please could you confirm this?

2. I want to buy a tower for my A1200 with all my extra add-ons. Which tower do you recommend? A second-hand PC tower, an Infinitiv Tower from MicroniK, the EZ-Tower from Eyetech or another? (I have about £300 to 400 to spend, I'm looking for a good Tower system).

3. I am also thinking about buying a PowerPC board (this being the future and all). Where does this fit in conjunction with the A1200 motherboard and the extra memory board, or do I need a full '030 board first? Also, will it fit easily in a tower? Keep up all the good work and long live the Amiga.

Ashley Kinney
Kent

1. Yes, it does sound like a heat problem. Maybe the card isn't seated perfectly, and when it warms up and expands ever so slightly, it breaks a contact. Or maybe the chip is simply getting too hot and crashing. Check that it is a true 33Mhz FPU and not a slower one which is being forced to run quicker than it should be. You should see a number on the chip – you are looking for a "33". If the chip is running too hot, try running the computer with the slot door removed. You could even try and find a suitable fan to keep it cool, or wedge the A1200 up slightly and use a standard CPU fan.

2. That depends on what you want, and on your DIY skills. If you are all fingers and thumbs, the Infinitiv tower is for you. If you want a nice big box with plenty of room – and a lower price – go for the Eyetech or ICS tower cases.

3. The PowerPC boards will probably replace any existing trapdoor card. They require a 68030/68040 and so if you have an '030 board at the moment, you should be able to remove the chip and plug it into the new card (assuming it's not surface mounted of course).

UPGRADE WORRIES

My equipment is a standard A1200HD. An upgrade is necessary, as you can see.

1. I am very interested in buying a mini tower case and after reading the article in *AF99*, decided to go for Stage 1. It says that a lead is needed to connect the Amiga to the tower. Where can I get hold of one?

3. Some tracks play far too fast? Nope – that's a new one on me. It should be impossible, as the CD player will be working in single speed mode for audio CDs. Plus all its DAC hardware is set up to work at a fixed rate. All I can suggest is that you try another player (there are dozens in the public domain) and see if that makes a difference. It shouldn't, as all the player software does is send a message to the CD drive telling it to start. I suspect that either you or the CD drive are on the alcopops!

HOW FAT?

I own an A600 with external HD, a 2Mb fatter Agnus chip but only 1Mb of chip RAM.

1. I have been told that I have a standard A600. Is this right? There is space for an extra chip near to the trapdoor expansion slot. If I stuck an extra piece of RAM on the motherboard, would this disable the trap door expansion slot?
2. I clean my disk drives but I still end up with all sorts of errors. How do I prevent this?

Mike Coneyworth
no address supplied



The Amiga 600 only allows you a maximum 2Mb of chip RAM.

1. Your A600 has a 2Mb Agnus for sure, but that only means it can handle up to 2Mb of chip RAM – it's not a measure of how much is available. A600's come with 1Mb of memory as standard, and so you see that 1Mb of chip memory is present from the Workbench title bar. I wouldn't mess with the extra socket. Instead, slot a 1Mb expansion card into the trapdoor to bring your A600 up to the maximum 2Mb of chip RAM.

Alternatively, bin the A600 and get an A1200 instead, which also supports fast memory.

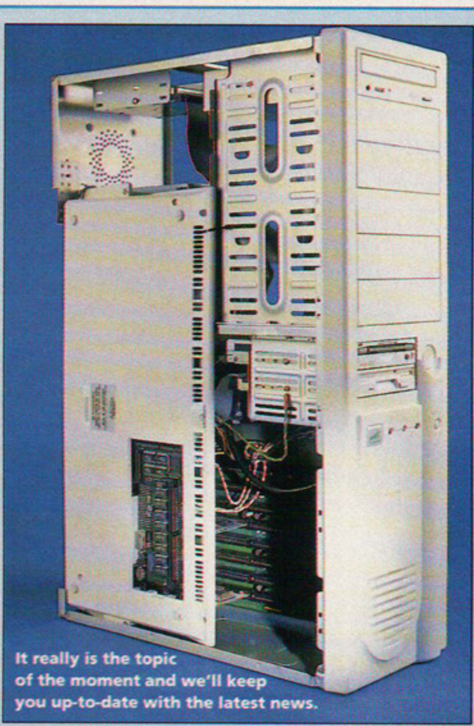
2. You shouldn't need to clean disk drives very frequently. Unless your computer is in an excessively dusty or smoky environment you should probably find you only need to clean them every few years or so. Too much cleaning will wear out the read/write heads. It's more likely that your disk drive has fallen out of alignment. This is a tricky DIY project, so ask a dealer to check the drive or buy a new one.

FEEL THE HEAT

I have an annoying problem with my Amiga which other readers have written in about... crashing when using an accelerator. I have an A1200, fitted with a Blizzard 1230 MkIV with 8Mb, running at 50Mhz. I also have a squirrel-based CD-ROM and an internal hard disk. My power supply is a Goliath, so there are obviously no PSU problems. I have found that everything runs fine, with no crashes, when the machine hasn't been on for long and the CPU is running cool but as soon as it gets hot, crashing on random programs occurs, including ones that are '030-compatible. The guru code is nearly always 8000000B, however, if I then reboot and turn off the 'Instruction Burst' option on the '030 with *SysInfo* or any other CPU control utility, everything works fine, with no crashing, despite about half a MIP loss in performance. I therefore suggest that other users try this as it has solved my crash problems entirely. I don't know why turning off the above works, perhaps you can tell me?

Mark Bradford
Wellingborough, North Hants

The only thing I can think of is that the LVSI micro-circuitry which makes up Instruction Cache is particularly susceptible to excessive heat, and is the first component to fail.



It really is the topic of the moment and we'll keep you up-to-date with the latest news.

2. Is the Squirrel SCSI interface needed, and if so, where does it plug in to the tower?
3. In Malta, PC peripherals are very cheap – a 12x CD-ROM costs just Lm50 (about £50). Can these PC CD-ROMs be used with an Amiga? What software is needed and where can I get hold of it? How compatible will it be with Amiga CDs, especially CD32 games?
4. The same applies to PC RAM. Can it be used on an Amiga?

Stefan Aquilina
Malta

1. With new tower cases such as the Infinitiv and the ICS/Eyetech systems, I'd now recommend you re-house your entire Amiga system. If you still want to stick to an A1200 connected to a mini-tower case holding your disk drives, you will need to decide to go IDE or SCSI. If SCSI, you can use the cable which comes with the Squirrel. If IDE, you can use standard IDE cables which cost a few pounds from any PC dealer.

2. It's needed if you want to go the SCSI route. You'll need to perform a bit of DIY, and obtain a suitable SCSI socket. Mount this in one of the PC case's expansion slots, and wire it to an internal SCSI 50-way ribbon cable for linking to the other drives. Yes, it's fiddly.

3. The PC CD-ROM drives are usually ATAPI/IDE compatible. To use them with the Amiga you need a suitable buffer board and software drivers. Eyetech (01642 713185) specialise in this way of connecting drives.

4. Yes, because PC RAM is in the form of 72 pin SIMMS, and most Amiga accelerator cards are designed to accept this format. The only snag is that most Amiga cards won't like EDO RAM or the new type of SDRAM, so avoid those and get the plain sort instead.

HOW MUCH CAN I SQUEEZE IN?

I have an A1200, with a 4-way EIDE interface supporting Seagate 2.5Gb & Western 250Mb HD and a Goldstar 8x CD-ROM, a GVP 1230 II Turbo+4Mb, an external floppy, and a Pro-Grab24RT + PCMCIA interface, a networked CD32 and a Canon BJ-10ex. With all this stuff I need to convert to a tower. The problem is, which one? After reading the article in *AF99* on tower conversions, I'm undecided. I know you're reluctant to recommend specific products, so I won't ask, but I do have a few queries regarding compatibility between Eyetech's and Blittersoft's tower hardware.

My intention is to upgrade from the 1230 to a 1260 accelerator, add Zorro capability, stick all the hardware in a tower and hopefully introduce it all to PowerPC, so:

1. Would the Cyberstorm PPC-604/200MHz, if positioned in the A4000 CPU slot of an Infinitiv Z3-i ZorroIII board, and installed in an Eyetech EZ-tower, operate correctly but still allow access to the ZorroIII slots and EZ-Tower ports? If the answer is that it would operate correctly but wouldn't line up, and you have the relevant information, could you give me advice on the possible combinations of towers and boards that will work together? (PowerPCs, 68060s and Zorros). I know this is quite extensive but it's impossible to get this information from the adverts.
2. Is upgrading to WB3.1, just for the CD-ROM support (instead of one of the more popular drivers) worth considering?

Mr. J. L. Mexson
Co Cork, Eire

1. We won't know for sure until the PPC card appears for review. It would be stupid if the card was too large to fit into a tower, but there are no guarantees. At the moment there simply isn't enough information on the next generation hardware to make educated statements on what will and won't work. I would certainly hope that that the expansions you want will all work together in one case. If in doubt, the Eyetech/ICS cases are large PC tower cases and probably have more room.

2. Um, no. I don't think so as there are some excellent CD filing systems available elsewhere. But there are other reasons to get WB3.1, not least, improved graphic card support.

Switching it off lets the processor work properly again. Whether this is specific to your 68030 chip or is common to all 68030's is something which only our test team (ie, loyal Amiga Format readers) and Motorola know. Nice discovery, though!

DUFF DISK

I've got a problem with my A1200 regarding validating. Sometimes, when I save to my hard drive, my system crashes and when I boot up after that, my HD goes insane. It takes a very long time to boot up because my hard drive is trying to validate the partition I saved to. Sometimes it manages to validate it, but sometimes it doesn't. I also get checksum errors, which are really hard to get rid of. In fact, for as long as I've owned an Amiga, I've never been able to get rid of them. The only choice I've got is to format the partition that gets the checksum error, and that's a really big pain to do, because after that, you have to install all your stuff again. Please let me know if you have a solution to this problem, and whether there is a disk doctor program that can get rid of checksum errors.

Roy Krister Ellingsen
Norway

This is not normal. Your Amiga should not be invalidating the drive in this way. Okay, so it may do it once in a blue moon if you switch off at an inopportune moment, or if a program crashes. However, it should not do it frequently. When it does, a re-format is a last-resort solution which should fix it without any further errors. I can think of four potential problems:

1. The disk drive is knackered. If the checksum errors always seem to be from the same portion of the disk, create a new partition to "trap" these sectors and don't use them again.

2. The cable or the interface between the Amiga and the hard drive is faulty. Replace the cable and try again Try the drive on another Amiga...

3. The Amiga and hard drive aren't talking properly. Try altering the MAX TRANSFER rate from the HDToolbox *program to a smaller value.*

4. There is a power problem: the PSU isn't supplying enough power, causing the hard drive to fail sporadically and corrupt data. Try a larger wattage power-supply unit.

LIFE IS HARD

Okay you lot! Who's making life difficult for me? I've only got an A500 v1.3, with a ROM switcher to v2, (waiting on the v3.1 from Power). I had the v3.1 chip some time ago, but my soldering can't have been too hot – I cocked the chip up trying to solder the link from 1 to 31, (going to try updating my A500 again).

Using my Workbench 2 to de-archive the *AF* subscribers disk 101, I tried to extract the *Calendar* and the *Amibroker* files to floppy. Failure ensued. Why? Because the bloody thing wants to send its message to DFO:, but we have to boot up in DFO: and the subs disk is in DF1:, (I have two disk drives). I had to go into ED to find out why the programs did not transfer to RAM.

J. Chantler
Surrey



It doesn't matter how many times we tell you, you still don't believe us – but an A1200 really is better than an A500. We promise!

You are making life difficult! Instead of soldering a wire directly to a ROM, solder it to a socket and then plug the ROM into it. Or, solder the wire to the pins on the ROM switcher itself (with the ROM removed of course).

Whoops.. I guess the subs disk wants to assume that most people have hard drives. Easy solution: edit the extract scripts chnaging DF0: to DF1:.

I know it's easy to say, but an A1200 is so much better than any expanded A500. Second-hand A1200s are turning up at ridiculously low prices, so keep your eyes peeled. It's hard to write off a thousand pounds worth of equipment, but that's the price of progress.

COLOUR CRISIS

I have an A1200 with Apollo 1230 accelerator (not lite), a 540Mb IDE hard drive and a total 10Mb of RAM. A short while ago I clicked on the "click for colours" icon in the "Look_Here_First" drawer of one of your cover CDs. All that happened was the background to my Workbench became slightly darker. No extra colours! Next time I booted up my computer I was greeted with the error message: "Intuition is attempting to reset the Workbench screen. Please close all the windows, except drawers." Whatever I do, I cannot rid my machine of this message each time I boot it up. If I open the palette drawer and click on the gadget for Multicolour settings, when I come out of it, either the computer crashes or I am stuck with just the four original Workbench colours. If I re-open the drawer, it shows "4 colour settings" despite my having clicked on the 'save' gadget. I have tried re-installing Workbench, I have tried deleting and copying over a new palette drawer, all to no avail. What can I do to correct this, short of wiping my hard drive and starting all over again?

Peter Richards
W. Sussex

The "click for colours" does very little other than try to create a suitable screen mode to suit the icons. It alters the palette to make sure the colours work okay. If Intuition is demanding you shut down all your windows and yet when you do so nothing happens – something is not right. Make sure there are no other programs running at all, anywhere. Close any shells. Stop any programs present in WBStartup from running. Use "Boot with no startup-sequence" to make sure. Then enter LoadWB and try using the Preferences ScreenMode program to try and set things back to normal.

WE NO NEED NO PATCHES!

I am running an A1200 with an Apollo 1240/25 board plus 8Mb of RAM, 4-speed CD and a 1.2Gb hard drive, all in a custom tower case conversion, using the Quattro 4 device IDE card from Golden Image, with Oliver Kastl's *IDEFix-97* and an Eyetech EZKey keyboard interface.

1. At the moment I am using a Philips CM8833 monitor and would like to know how to stop the display flickering in interlaced screen mode? Do I need to get a multisync monitor or is it possible to get a flicker fixer? Would it be better to go the whole hog and get a ZorroII board and then something like the PicassoII+ graphics card? What is the Graffiti box all about?

2. When I installed the Apollo 1240/25 it did not like the setpatch command in my startup sequence and kept crashing out with C:Version error. If I boot up without the chipset I do not get AGA chipset but only ECS. If, on the other hand, I boot up from a Workbench floppy it is quite happy with the setpatch command but does not give me the CD drivers.

I have removed the Setpatch and Version commands from the HD C: drawer and replaced them with the ones from the floppy. I have also done the same with the Version.Library from the floppy Libs: drawer but this still causes a recoverable alert, followed by the C:Version error. On Aminet I discovered this error is for KS/WB 3.1, not my KS/WM 3.0. Do you know how to cure this?

S.J Webb
Ipswich

1. By definition, an Interlaced mode is designed to flicker. You can buy flicker-fixers, which are special framestores which capture both the fields of the video, combine them into one frame and send them out. The disadvantage is that you need the flicker-fixer hardware and a high scan rate monitor: preferably a multiscan so you can use the existing Amiga graphics modes too. You cannot use a flicker-fixer with a standard 15kHz monitor such as the CM8833.

Remember though that AGA Amigas have a basic kind of flicker-fixer built in. If you do get a multiscan monitor, you might be lucky and find it supports the double-scan modes such as dblPAL video modes, which produce a non-flickering display of 512 by 640 or larger. As you guessed, without a doubt the best solution is to use a graphics card. This will produce a rock-steady display in up to 24-bit colour with huge screen resolutions. It will revolutionise your Workbench.

2. Setpatch should work with the 68040. Check that you have the very latest version, and ask your accelerator card dealer to supply you with one if necessary. The version which I use on my A4000/040 is 40.16. You can check yours from the Shell by entering "version c:setpatch".

A Quick Guide to...

EMULATION



1 The Amiga can emulate the Apple Mac and PC computers amongst others. At the moment the emulation is software-based. This is OK for the Apples, as they are 680x0 based, but the PC uses totally different processors.

2 To emulate the Apple Mac, use the *Fusion* or *ShapeShifter* programs. You will need to obtain a ROM image from a real Apple Mac.

3 To emulate the PC, use *PC Task* or *PCx*. Both are excellent programs, but don't expect to be able to run the latest games.

4 The faster the Amiga, the faster the emulated machine. However, even a very fast Amiga cannot emulate a PC fast enough to run Windows95 comfortably.

5 A graphics card makes all the difference, especially when emulating a Mac. With a graphics card, an Amiga can run as fast – or faster – than the original machine.

6 The PC can emulate the Amiga, using a freely-distributable program called "*UAE*". A very fast Pentium PC can run Workbench about as quickly as an A1200.

7 When using an emulator, try to donate an entire disk partition to the new system (Apple or PC) as this speeds up disk access considerably.

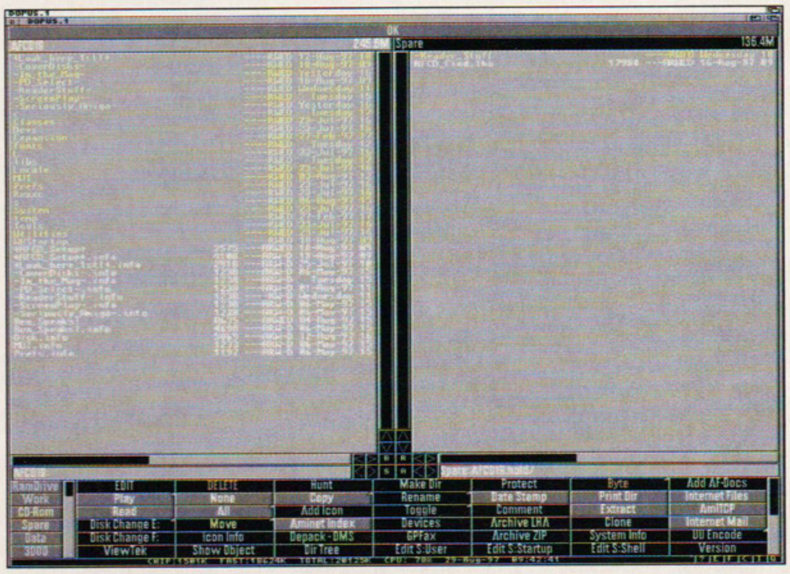
JPEG TO IFF VIA DOPUS

My hobby is desktop video and I have *Scala MM400* installed on my hard drive, as well as *Directory Opus 4*. Can you please tell me how to configure *Dopus 4* so that I can convert JPEG pictures to IFF format, and visa-versa?

Mr D. R. Sagrott
Portsmouth

You can't, at least not easily. Directory Opus *is not designed to convert files, only to show them. So for example, you can view JPEG or IFF files, but you cannot convert them. You can't highlight a set of JPEG files and then have them all copied to another folder as IFFs – it's not a limitation of* DOpus, *it's just that the program is simply not designed for this.*

Instead you'll need to find a program which can carry out conversions like this, AND has an ARexx port. You can then write an ARexx script which allows you to take a block of files, load them and save them in a different format. I use Art Department Professional *to carry out this task, and I'm sure other programs can do it too.*



Directory Opus **is good but not quite that good! Make sure you've got the right program for the right task!**

PRINTER DISK

I have an A1200 with 127Mb hard drive and a Blizzard 8Mb RAM board fitted. I have just bought an HP Deskjet 660C printer. I have managed to use the printer driver from the Workbench disk and the machine prints OK, but I need to access disk no.3 supplied with the printer, which is written in DOS. I have put the disk in DFO: but the disk icon says "empty". Do I need to buy an emulator before I can access this disk?

J. F. Wake
London

The disk is of no use to you. It contains drivers for the PC, and they won't work on the Amiga. Even if you got a PC emulator, they would only give you the same facilities that you have at the moment. There are several dedicated Amiga programs, available from Wizard and HiSoft, which are designed to help you get the most from your printer, and you should try these instead.

IF YOU HAVE A QUERY...

At *Amiga Format* we aim to answer as many questions as possible. Unlike some magazines, we don't just concentrate on our areas of expertise – we take on all your problems (as long as an Amiga is involved).



Graeme Sandiford

Here are a few tips on sending in questions:

- Be concise.
- Detail the problem as best as you can.
- Describe the events that caused the problem.
- Give full details of your equipment.
- Make sure your question is relevant and wouldn't be more easily solved by contacting the dealer from whom you bought the goods.

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○ A1000 ○ A1200 ○ A1500
○ A2000 ○ A3000 ○ A4000

Kickstart version

○ 1.2 ○ 1.3 ○ 2.x ○ 3.x

Hard Disk: .... Mb

Manufacturer: ....

Extra RAM fitted – type, size, (Mb) and manufacturer:

....

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Details of other hardware:

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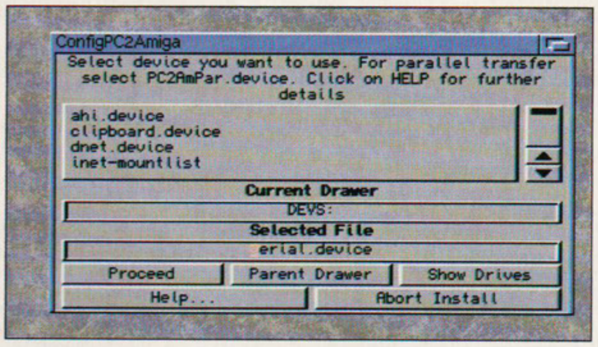


Amiga.net

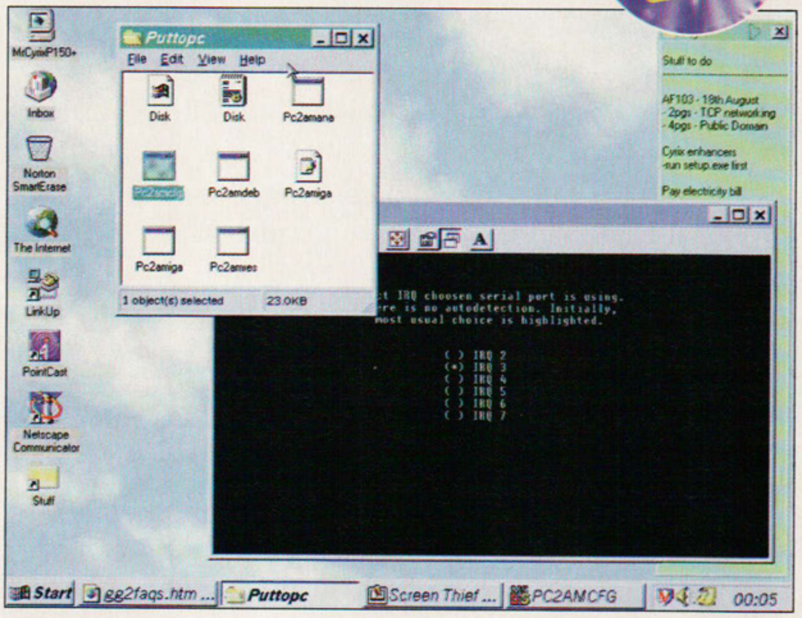
Outside the sun is blazing but the dedicated Dave Cusick is sat in a swelteringly hot room messing around with his Amigas.

AFCD19:-In_the_Mag-/Amiga.net

ON THIS MONTH'S CD



The Amiga side of *PC2Am* is easily configured...



...as is the PC side, provided you know your IRQs from your COM ports.

The message from Ben Vost came as no surprise. We often exchange several emails in the days or weeks before an Amiga.net deadline. But little did I know that Ben's latest suggestion would prove far more problematic than anything I've covered in this column before.

"What about a slip connection between two Amigas? Or a PLIP one?" he asked. "I know it's a bit more complex than your usual brief, but it could make for a groovy article." Well, indeed it could, thought I.

"ProNet was installed in a flash and it worked beautifully, first time."

As Ben pointed out, in addition to transferring files from one machine to another, two folks locally connected via TCP/IP could also play network games such as *FreeCiv*. But there were several factors to weigh up, not least the fact that I only had one Amiga.

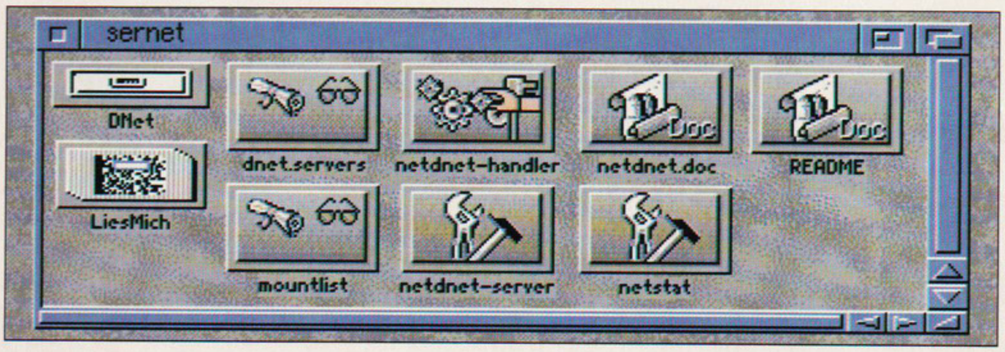
A couple of days later, having procured a second-hand A1200 tower system, I found a null modem lead for around a fiver at the local Maplins store. I set the two machines up alongside each other, plugged in the new lead, and dug around for my spare trapdoor expansion board. Unfortunately, the A1200 tower system didn't want to boot with the card installed, making it impossible to get *Miami* running on the machine. (I'd forgotten just how limiting 2Mb of chip RAM is.) Meanwhile, if anybody knows much about early MicroniK tower systems I'd love to hear from them...

ACCESS ALL AREAS

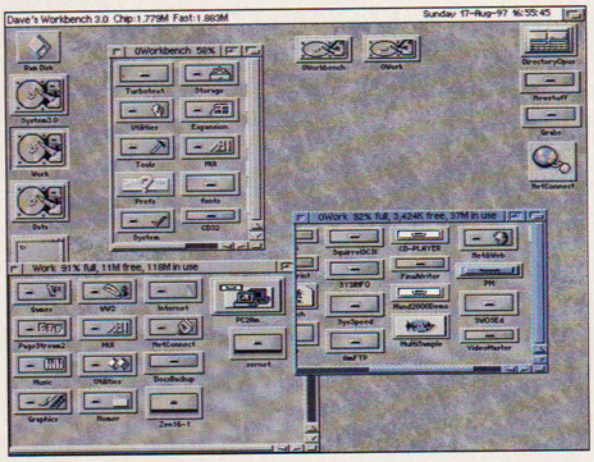
So an Amiga.net column on the TCP/IP networking of two Amigas will have to wait for another issue. However, with a null modem cable on my hands and two machines set up alongside one another, I thought I'd see if I could network them using some other means.

By scouring the comm/net directory of Aminet I unearthed a package called *SerNet*, whereupon I found that I also needed Matt Dillon's aging *DNet* software on my system. Linking up to Aminet once more, I downloaded and installed *DNet*, but, after spending too much time trying to get the *SerNet* system to work, I decided there had to be a better alternative.

Next up was *HNet*, which promised a clear installation procedure and 'a simple but effective' alternative to



Sernet **looks like it ought to be quite simple to install, but I found the reality to be rather different.**



ProNet **in action. The drives with names preceded by an O are actually partitions on the A1200T, which is acting as the server machine for my other A1200, on which this screen shot was taken.**

SerNet. When I later mentioned *HNet* to one chap on IRC, his response was brief and to the point: "*HNet* sucks!"

Although *HNet* might work well once up and running, I would be inclined to agree; after running the installation script I found that neither of my Amigas would boot up. Of course, Murphy's Second Law of Aminet Downloading states that the program

"The ultimate networking solution is an Ethernet board... which provides extremely rapid data transfer..."

you seek will always be the last one you dearchive (or something). Michael Krause's *ProNet* was installed in a flash and worked beautifully, first time.

On a simple level, *ProNet* can be used to allow one Amiga to access devices available on another. Running the software is as simple as opening the Shell on each machine and entering a command with a couple of arguments, whereupon the icons representing the selected server devices will appear on the Workbench of the client machine. It is also possible to use *ProNet* to make both machines into servers and clients simultaneously, allowing the computers to access each other's devices. Using the supplied utilities, you can also send messages to networked machines, and run programs remotely.

ProNet can be used either with null modem leads or *ParNet* cables, and if a machine has multiple ports available it can be networked to several machines at once. I have heard of four machines being used together over a *ProNet* network, and in theory it might be possible to add even more computers.

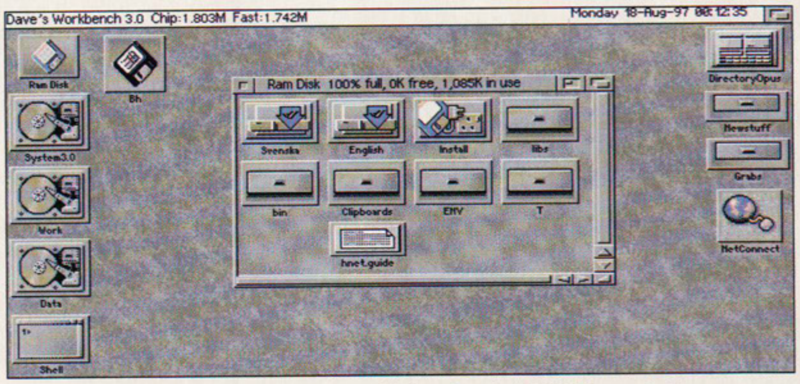
As you will no doubt have realised, I have become extremely fond of *ProNet* in a very short space of time – so much so that I shall have to start saving my pennies so that I can pay the 20DM registration fee, since *ProNet* is Shareware. Without a keyfile, *ProNet* will stop working after a while; and besides, it's this sort of high-quality software that we need to ensure will still be produced for the Amiga in the future, and the best way of ensuring that that happens is by supporting Shareware authors.

Anyway, flushed with success at having managed to link my two A1200s via a null modem lead, I then attempted to connect my Amiga to my PC hard drives and promptly downloaded *PC2Am* from Aminet. The program is relatively simple to install on the Amiga and, although I wouldn't consider myself a PC expert, I didn't have any problems setting up the PC configuration program to use the appropriate COM Port and IRQ numbers. It was therefore a trifle disheartening to see that *PC2Am* didn't want to work. I suppose the moral of the tale is that, while networking your Amiga to other machines needn't be expensive, getting some of the driver software to work properly can be time-consuming. I can see why people are so keen to opt for all-in-one networking solutions such as Weird Science's *Network PC* system...

Another beauty of commercial solutions like *Network PC* is that they use the Amiga's parallel port, which is capable of far greater data transmission speeds than the puny internal serial interface – although if you are an amateur electronics fan then you can, of course, make up *ParNet*-style cables yourself. On the other hand, if you happen to have a high-speed serial interface then parallel solutions lose much of their attraction – particularly if your interface has multiple ports, allowing you to have a null modem lead and modem connected simultaneously.

AMINET ARCHIVES

SerNet
comm/net/sernet24.lha
HNet
comm/net/hnet.lha
ProNet
comm/net/ProNET32.lha
PC2Am
comm/misc/PC2Am308.lha



HNet **after dearchiving. I would have pictured it in action, but it didn't seem to like either of my machines.**

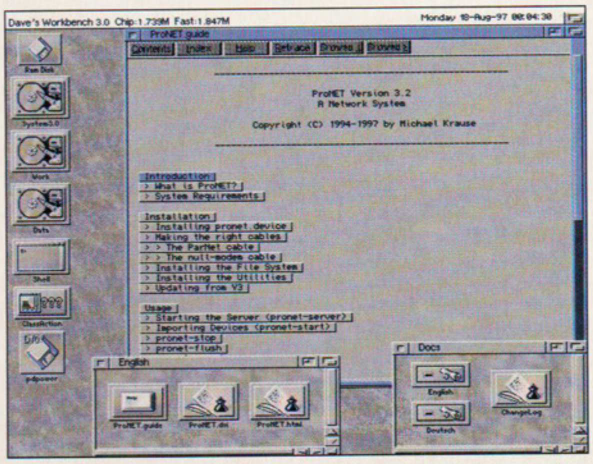
MAKING THE CONNECTION

If you want a faster connection than either serial or parallel link-ups can offer, there are a couple of other, older networking systems you might want to investigate: *AmigaLink,* a floppy port link-up system, and Arcnet A2060 boards. These systems are hard to get hold of, but you might be able to pick them up second-hand. VillageTronic also produce *Liana,* bundled with the Envoy networking software, which uses a cable connecting two Amigas via their parallel ports.

The ultimate networking solution is, of course, an Ethernet board, which could be fitted to a big-box or tower Amiga system to provide rapid data transfer between your Amiga and a large number of other machines. With a GoldenGate2 bridgeboard, it's possible to use PC Ethernet cards (as well as cheap internal modems) under *AmiTCP* and other SANA-II-compliant software, such as *Envoy.* It's not a cheap option, but if you want to join your Amiga to a proper Local Area Network, it is definitely the way to go.

CONTACT POINT

I can be reached with comments, suggestions and feedback at dave@dcus.demon.co.uk, or via my Web site at http://www.dcus.demon.co.uk/



Supplied with some excellent documentation, ***ProNet*** **is to my mind the easiest way of networking two Amigas via a null modem cable.**

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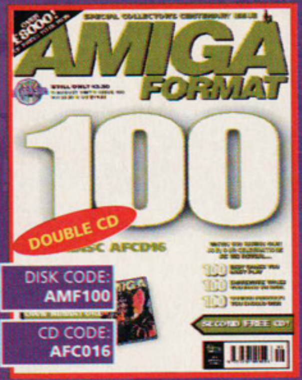
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The indispensable guide to getting the most out of your software

CREATIVE



Owing to popular demand from readers all over the world we've finally succumbed and we are now presenting a new tutorial on the thorny subject of Unix for the Amiga in the guise of NetBSD. Not only that, but you programming types can get your teeth stuck into our second new tutorial, this time on programming your own *MUI* applications in C.

As usual, we depend on your suggestions for new tutorials so that we are constantly running exactly what you want to know about, in the depth it deserves.

Ben's *DOpus* tutorial runs until next month, so if there's something in particular you'd like to see after that, then let us know.

For now, rest easy in the knowledge that you are getting the best lessons in how to use your computer from experts in their fields, and you'll continue to do so ad infinitum...

Nick Veitch

SEND IT IN!

We need YOUR input.

Is there something that you would like to see covered in one of the current tutorial series? Why not send your suggestion to us at the magazine. Here are some things you might like to think about:

ARexx
Commodore's excellent decision to include Arexx with Workbench was only matched by their stupidity in not documenting it properly. If you are having trouble why not write to us with a description of what you are trying to do.

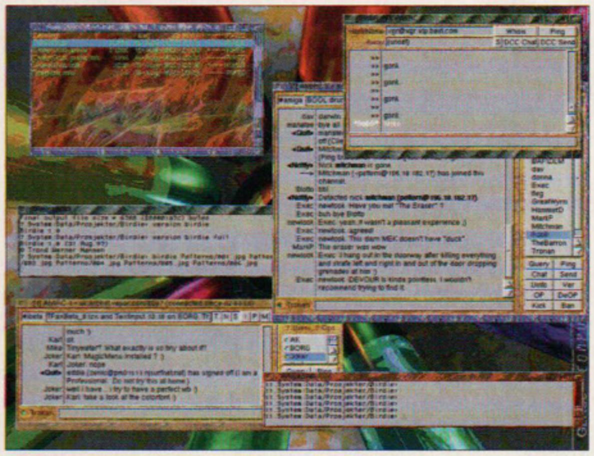
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MUI

CONTENTS



Having *MUI* means you can always have a headache in the mornings.

In the first part of a brand new series Dr. Karl Bellve explains the background to *Magic User Interface*.

Just saying *MUI* (*Magic User Interface*, author Stefan Stuntz) in public might land you in a brawl. It is one of the most controversial pieces of software around. *MUI* gives you the ability to modify the look and feel of every single *MUI* program globally or independently of each other. Some Amiga users may remember the days of hardcoded *Topaz/8*, in bland unresizable GUIs, that *MUI* has rescued us from. People who had large screen resolutions and colour depths were forced to look at ugly and confining GUIs, meant for unexpanded Amigas. *MUI* took the control of the GUI's look and feel from the programmer and gave it back to the user.

Using *MUI* substantially shortens a program's development time because it builds the basic graphical objects that the programmer usually does. *MUI* also consolidates all the GUI code into multiple libraries, which are each only loaded when needed. If you use multiple *MUI* programs, you start to save memory because the GUI code is shared in common libraries instead of duplicated in the programs.

Its detractors complain that *MUI* is slow, but they'd do well to compare its programs to the complex interfaces of non-*MUI* programs with a GUI, a few buttons and a string gadget that aren't font-sensitive or resizable.

INSTALLATION

MUI needs to be installed separately to your program and is available from your nearest Aminet site or CD in util/libs/mui38usr.lha., or from http://www.sasg.com/ There is another archive for developers located in dev/mui/mui38dev.lha. You need only install the second archive if you plan to use *MUI* as a development system. Once the archive is decompressed, execute the installer script in the archive.

One of the important parts of the installer script is the bit that modifies your s:user-startup script. This is where *MUI* assigns *MUI* and adds the *MUI* libraries to the library path. **Listing 1** shows exactly what it adds.

If you don't let the *MUI* installer script add this to your user-startup, then you must do it manually.

A common problem with *MUI* installation occurs when you install a recent version of it on top of an old one. *MUI* once installed its libraries in LIBS: and other accessory programs elsewhere. It now installs itself into one directory to make removal easier. If you have an old *MUI* installation, you'll need to remove the old *MUI* libraries in LIBS or they'll be used instead and your computer may fail or crash.

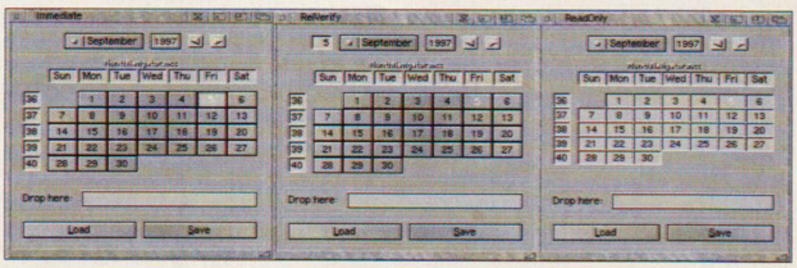
USER FEATURES

The demos provided in the user archive of *MUI* show a brief glimpse of its power and can be found in mui:demos/ if you had the installer install them. The program *MUI-Demo* shows several abilities of *MUI*. Windows can be resized by dragging the lower right corner gadget (everything inside the window is resized and repositioned too), allowing *MUI* programs to take advantage of larger screens. *MUI* also lets the user specify any kind of font for almost every aspect of *MUI*, making things easier for users with large screens or bad eyesight. These two features are in every *MUI* program and you can also

"MUI took the control of the GUI's look and feel from the programmer and gave it back to the user."

LISTING 1

```
;BEGIN MUI
if exists "Work:MUI"
  assign MUI: "Work:MUI"
  if exists MUI:Libs
    assign add LIBS: MUI:Libs
  endif
  if exists MUI:Locale
    assign add LOCALE: MUI:Locale
  endif
  version >nil: exec.library 39
  if not warn
    if exists MUI:Docs
      if exists HELP:dummy ; do not remove
      endif              ; this entry!
      assign add HELP: MUI:Docs
    endif
  endif
endif
;END MUI
```



The custom class that can provide this updated calendar is just one of many.



A preview of our project – a *MUI* Tic-Tac-Toe game.



The more *MUI* tools you run, the less memory they use.

specify the imagery for each gadget, like the scroll bar or the colour of the buttons, and the backgrounds behind the gadgets. To do any of this, you must run the *MUI* prefs program. If you run it directly, then you will set the global preferences for all *MUI* programs on your system, if you run it from within a *MUI* program, then you can specify the preferences for only that program.

PREFERENCES

To change the preferences, run the *MUI* program called *MUI*, then the preferences program and you'll see a graphical list on the left. The easiest way to modify your *MUI* settings is to select a preset from the menu. Select Project/Open and you can use these as a basis for customisation.

After you have opened the *MUI* preference editor, you can select an item on the left which changes information on the right. The first item selected is "Info". Info shows information about your version of *MUI*. In my case, it also shows that I have a registered version. This enables me to permanently save my preferences settings, which is the only feature the demo version does not have. To register, select the register button. Below Info is the System Preferences. Here you can construct screens for *MUI* programs. The Call Inspector button will call the Inspector program which changes the depths and sizes of screens and enables you to select the palette.

Also in the system preferences is the bubble help. Leave your mouse over a *MUI* object and, if the author of that program included help, a message bubble will appear. I found that bubble help got in my way when typing into string gadgets, so I disabled it by moving the First Bubble slider to the left. If more help is needed, hit the help key on the keyboard. *MUI* will load an AmigaGuide document, if present for that program. It could also be context-sensitive help. *MUI* will try to open an AmigaGuide document related to where the mouse pointer was when the help key was pressed.

If any of your *MUI*-based programs have an ARexx interface, for example *AmIRC*, you need to have the ARexx checkmark selected (this is not selected by default). The Windows preference area lets you customise the fonts and drawing patterns of your windows. You want to have the *MUI* preference gadget selected because this puts it in the window border of your *MUI* programs, enabling easy access to the preferences for each one. Some MUI programs can call the preference program from their menu. You can also modify the backgrounds for windows and listviews and other MUI objects. MUI can use any type of image format as long as you have the appropriate datatype.

VERSATILITY

The screenshots show my Workbench with some common *MUI* programs. *AmFTP* and *AmIRC* have different background window patterns, as each program can be customised individually. The background of my MUI buttons is the same on all programs – *MUI* enables the setting of global preferences.

I suggest you open the *MUI* preference editor and play with the settings. The Shareware version allows you to set every setting but you can't save – you should register *MUI* and support Shareware authors. In future, I'll discuss simple and complex *MUI* programming. I suggest you get your compilers reading and the *MUI* development archive installed. AF

WHAT ARE MCCs AND MCPs?

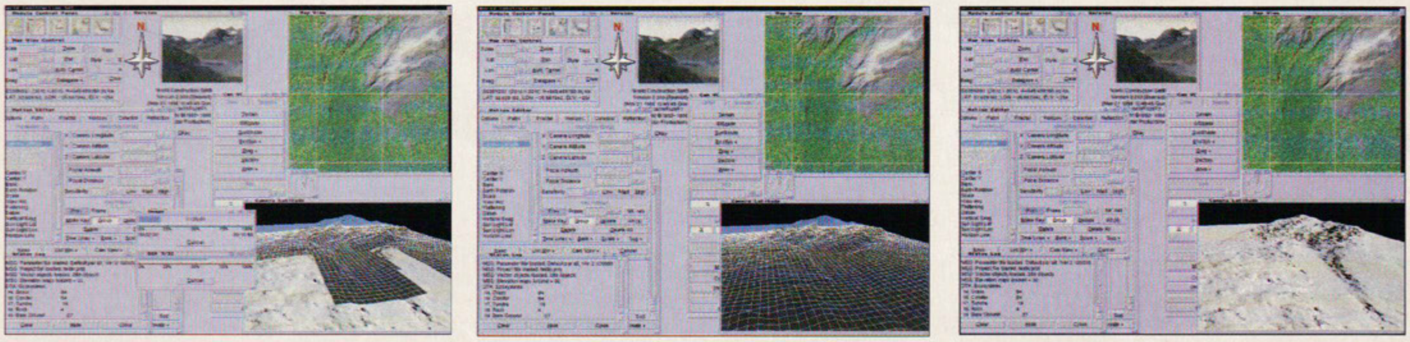
Sometimes it is necessary to extend the functionality of *MUI*. *MUI* has the ability to use external libraries and can have new extensions added to it, such as MCCs (*MUI* Custom Class). Many programs use MCCs such as *Voyager* and *AmIRC*. MCCs should be installed in PROGDIR:MUI/ or MUI:LIBS/MUI/. (PROGDIR: is shorthand for the directory you started the program in.) If the MCCs are not in these locations, then *MUI* will not be able to find them and your program may not function properly. MCPs are the preference program for the MCC, just run the *MUI* preference program to access them and move the left listview down until you see the appropriate MCP. *MUI* looks for MCPs in MUI:LIBS/MUI/ and not in PROGDIR:MUI/. MCCs and MCPs can be written by anyone. However, programs may have internal classes or external classes. If a programmer thinks his MMC will be needed by others, he can make it an external public MCC. There are several rules for this and a registration process. The SASG web site has information about how to get a MCC/MCP registered. If the custom class will only be internal, then it does not have to be registered.

However, programmers need to obtain a unique ID for themselves which they can base methods upon. For example:

```
#define MUIM_ImageMap_Redraw
(TAG_USER | (5015<<16) | 0x0200)
```

Here I'm defining a method called MUIM_ImageMap_Redraw. MUIM for my custom class. ImageMap is the name of my class. Therefore, all methods in the class ImageMap have a base of MUIM_ImageMap_. Redraw is the name of the method. The method will be based upon three numbers; TAG_USER, my ID and a unique number I assign to separate it from other methods I create. TAG_USER is already defined by the operating system. Each method should be unique but I will go into this in more depth at a later date.

World Construction Set **was the first commercial tool to make use of *MUI*'s advanced features.**



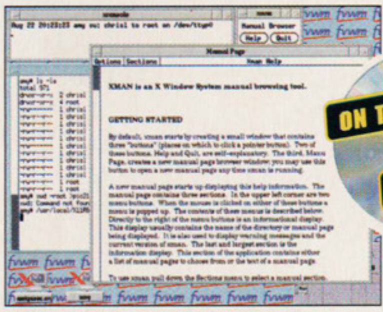
NetBSD

CONTENTS

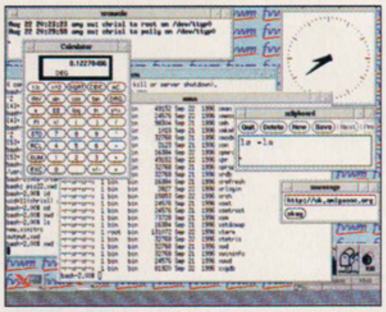
The complete Unix operating system. Chris Livermore starts out with a facelift.

ON THIS MONTH'S CD

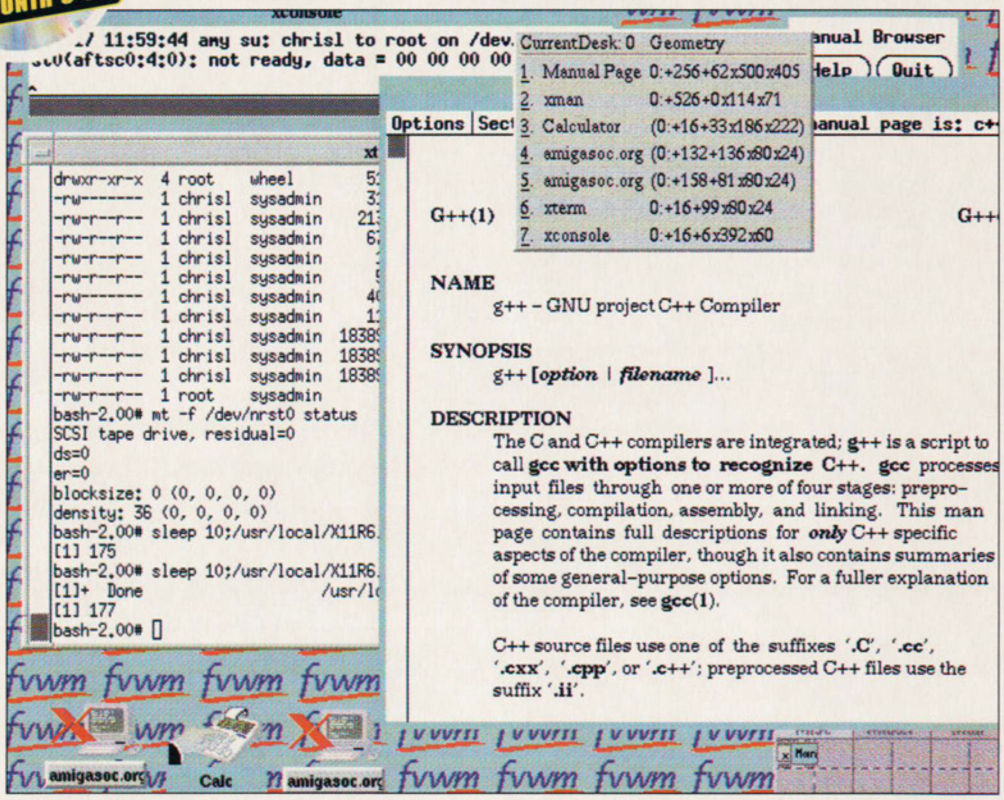
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X provides a graphical environment which can be used to run many programs...



As well as traditional text-based applications, *X* allows the user to add other useful features.

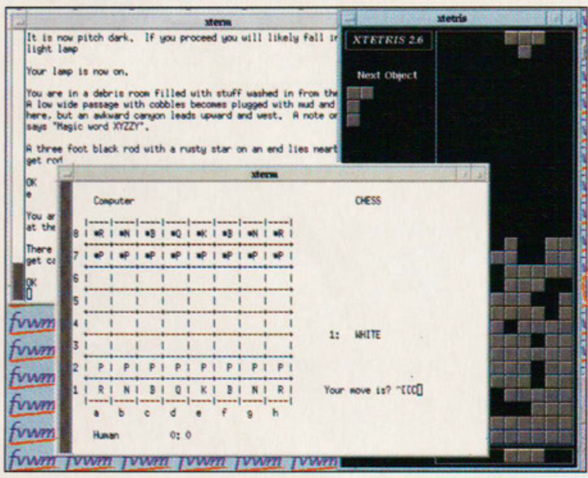


The FVWM Windows Manager provides an easy way of running more than one task at once. Windows that are not required can be minimised to save space and appear as icons at the bottom of the screen.

We included a version of *NetBSD* on last month's CD. If you installed it, one of your first thoughts (after the joy of installing it correctly sunk in) must have been: "it's not much to look at, is it?" Well, this month we're going to rectify that.

Although all Unixes, including *NetBSD*, are heavily text-based operating systems, there is a "Windowing System" known as the "*X Windowing System*" or more simply "*X*". Despite its simple name, *X* is a very complex package providing hardware-independent retargetable graphics. It works by running what is called an X server on your desktop machine. This server does not add a Graphical User Interface (GUI) to your machine, it provides a mechanism for other graphical applications to talk to your computer.

Running on top of the *X* server you will need a Window Manager which will control the look and feel of the desktop environment. There are many different types available, including ones to make your desktop look like that of a Mac, a Windows 95 PC or even an Amiga. The Amiga distribution of *X* includes two Windows managers – *FVWM* and *CTWM*. The *X-Windows* distribution is included on this month's cover CD. Installation instructions are also provided, courtesy of the people at UK.AmigaSoc.org, as are HTML files describing vi and other useful Unix commands. The installation process should take 30-60 minutes, depending on the speed of your machine and your knowledge of Unix.



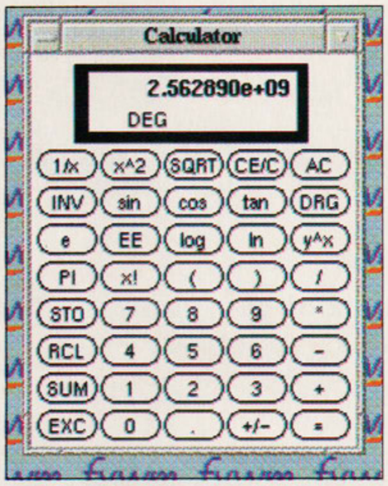
And, of course, *X* provides the ideal environment for many games. Although playing more than one at a time can be a little confusing.

Tip!

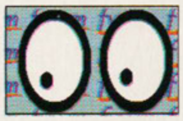
/tmp is *NetBSD's* equivalent of the RAM disk: *NetBSD* uses a combination of physical RAM and DISK (the swap partition) to create /tmp. /tmp is ideal for use as a scratch pad.

SOFTWARE

Some of the programs included with the X11 distribution:
Xcalc – a scientific calculator
Xedit – a simple text editor
Xeyes – puts a pair of eyes on your desktop
Xlock – locks the screen until a password is entered
Xgas – animated simulation of an ideal gas
Xtetris – tetris for X
puzzle – sliding block puzzle game
Xmessage – leave messages on your desktop
Xload – graphical CPU usage display



The X11 distribution has a variety of applications including a scientific calculator...







...eyes that follow the mouse, a clock and a sliding desktop puzzle...



...the CPU meter is more useful than some – others show the lighter side of NetBSD.

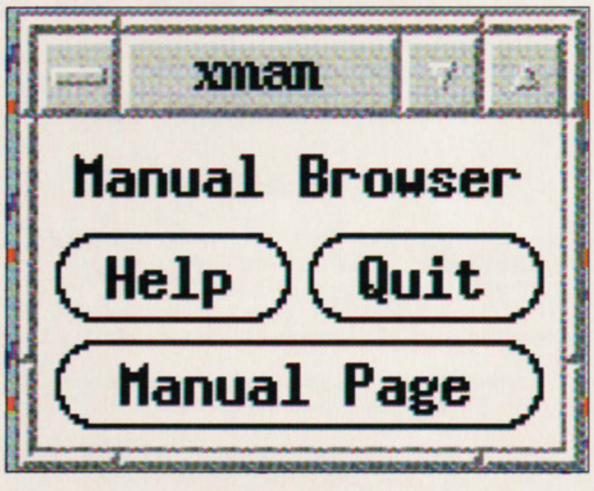
Starting *X* will launch both the X-server and a windows manager, usually *FVWM* by default, which will produce a screen much like the one illustrated. Pressing the left mouse over the background will produce a menu of applications. (Not all of these are included with the *X11* distribution so don't expect to be able to run them all.) The right mouse button produces another menu listing current running programs, allowing you to switch between them. Pressing the left mouse button over the close gadget in the top left hand corner of each window produces a menu which enables you to minimise, close or kill that window.

X FILES

The default installation opens two windows at startup, an Xconsole and an Xterm. The Xconsole is *NetBSD*'s message window. You will find you can't use it to type commands into, instead *NetBSD* will print any system messages in this window. This enables you to keep an eye on what your system is doing at all times without it interfering with what you are doing. (If you are not running *X* and are logged into the console, *NetBSD* will display any messages on your screen).

The Xterm is simply a graphical version of the normal *NetBSD* screen, which you can use to enter commands.

Xman – an *X* manual viewer – one of the more useful applications...



It is possible, however to run more than one Xterm at once, enabling you to perform many tasks, simultaneously.

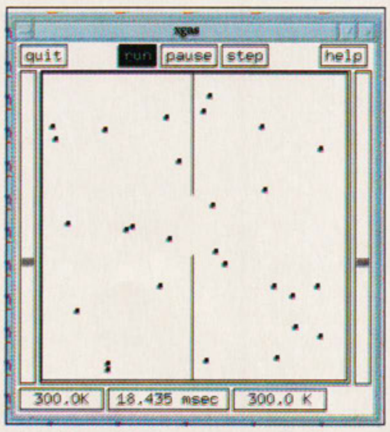
The button bar in the bottom right hand corner contains a clock, a CPU meter, a mailbox flag – although no mail client is included – and a kill button. The kill button can terminate any programs you don't want, but it's better to exit them in a more normal fashion.

Under the button bar are three boxes that represent three virtual desktops. If you have a powerful enough system, these allow you to run many

"NetBSD... enables you to keep an eye on what your system is doing at all times..."

applications at once without your display becoming cluttered. Most of the programs that can utilise a graphical display can be found in /usr/local/X11R6.1/bin.

One of the strengths of *X* is that an application does not need to be installed on your machine for you to use it. If you are connected to a network with other Unix machines on it you can run an application on a remote machine and instruct it to use your X-server as its



...but this one is more strange – Xgas is an ideal gas simulator!?

Tip! The ~ character can be used to quickly change to any user's home directory and is found in many URLs on the Internet. cd~chrisl has the same effect as cd /export/home/chrisl

display. This is known as "exporting the display". This feature is used by many large organisations, as it enables them to use cheap, relatively low-power PCs as desktop machines, while letting users run high-power applications on large expensive Unix workstations, hidden away in server rooms.

LIMITED EDITIONS

If you are fortunate enough to have your Amiga on a network with other Unix machines, this can give you instant access to a wide range of software, including titles that have never been released on the Amiga. There is even a version of Windows NT that can export its display to any machine running *X* – although personally I wouldn't let it anywhere near my Amiga!

Next month we'll be continuing this theme by taking a look at what applications are available for *NetBSD* and how we go about installing them, and the boys at UK.AmigaSoc.org will have some more useful hints and tips on customising and using *NetBSD*.

GLOSSARY

Console – On multi-user machines, each user is expected to work at a distance from the machine, on a desktop PC or vt100 terminal and communicate via a network. The console is the monitor that is directly connected to the machine. It is usually only used for maintenance and displaying errors. On machines with no network there is no choice but to work at the console.

vt100 – A text-only data terminal. Essentially it is little more than a screen and keyboard for communicating via a network.

Retargetable – When used for graphics, it means that the graphics in question can be displayed on a "retargetted" device, ie, a graphics card.

Swap partition – a dedicated disk partition that is used as virtual memory.

Exporting the display – the process of running an application on one machine but displaying the interface on another machine.

csh – the C shell. One of the many different types of command lines that are available. Others include the Z shell (zsh), the Bourne again shell (bash) and the Korn shell (ksh).

DOpus 5.5

CONTENTS

FTP is the Internet copying tool everyone uses. *DOpus* makes it even easier if you follow Ben Vost's tutorial.

The first thing I'll say if you want to use *DOpus*' FTP tools on a regular basis is... get *Magellan*! Its much improved FTP interface is a lot faster in use and far more flexible than *5.5*'s – just another reason to upgrade! However, this shouldn't dissuade you from making full use of *5.5*'s existing facilities, some of which may well be unfamiliar to you.

The first thing to take a look at (and hopefully understand) is *DOpus*' ftp.config file. Fortunately, the file is very well commented and you should have little trouble working out what's going on. Even so, a list of the arguments and their meanings always comes in handy:

ARGUMENTS

.... Any line that starts with a hash character like this is ignored by *DOpus*.

LIBRARY .... This defaults to *AmiTCP* – for *AmiTCP/IP, Miami or TermiteTCP*. You can change it, if you need to, to AS225 or INET if you are using either of these stacks, but this is going to be unlikely.

LOG .... This is a session output file for your FTP sessions. It can be directed towards a file (LOG RAM:ftplog.txt) or towards a shell window (Log CON:)

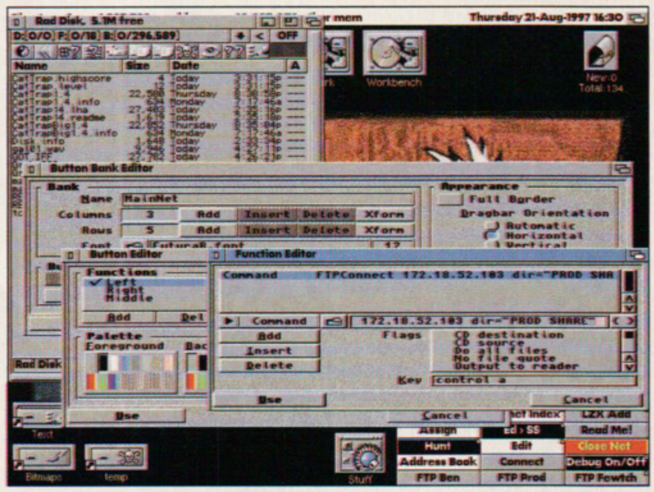
LOGOFF .... This is a switch to turn off logging. Why you'd need this, heaven only knows...

DEBUG .... This switch specifies the level of detail that is output to your log file. Obviously, it's of no use without the Log keyword.

TIMEOUT .... Specifies *DOpus*' timeout settings while waiting for a response to an FTP command. This defaults to 60 seconds.

LISTUPDATE ... Another one you probably won't need to mess with. This determines how often the lister gets updated, as it is reading a new FTP directory, and defaults to one second.

These commands affect global FTP use in *DOpus*, but the next section of the config file deals with the FTP addresses it has access to. These are listed in the box at the bottom of the page. Admittedly, all this info becomes somewhat redundant if you upgrade, but it's still useful since *Magellan* still uses this config file. The only difference is that it is presented in a nice user-friendly requestor rather than you having to type it all in, but it's still far swifter to type in the config file if you know what you're doing – if, say for example, you have a large list of FTP addresses you want to add. It's also very handy if you want to set up a button for a particular, oft-used site, like we do for our office Macs. Setting up a button for your favourite FTP site is simplicity itself now that you know what all the *DOpus* FTP commands do, the only shame is that you can't snapshot a lister so that files appear by date order rather than size, or so that filename patterns are



Making new buttons for FTP sites should be child's play now you know what all the arguments and options are. Here's my connection to Andrea's Mac.

FTP ADDRESSES

ANON .... This shows that you have anonymous access to this FTP site and you will be entered as user: anonymous password: yours@host.domain.

ACCT .... This shows that you have an account at the listed FTP site and will prompt you for your name and password.

ALIAS .... This command is followed by the alias you have for the site to make it quicker for you to access.

HOST .... This keyword is optional since *DOpus* parses FTP addresses anyway.

ADDR .... This is for the numeric IP address for an FTP site.

PATH .... This keyword specifies the path you wish to start at once you have logged onto your FTP site.

USER .... If your access to an FTP site is not anonymous, you can enter your username here to save you having to type it in when you connect.

PASS .... The same thing applies here, but be cautious of using this option since *DOpus* does not encrypt this password in any way.

HIDDEN HINTS

Our handy guide to things hidden away in *DOpus*'s manual hits its penultimate chapter with a look at keyboard shortcuts:

TEXT VIEWER

People who are upgrading from *DOpus 4* should be pleased to note that not only can the search facility in the text viewer be activated using the RAmiga-s combo listed in the menu, but also in the old *DOpus 4* way, by just using the 's' key on its own. You can also use the 'Esc' or 'q' key to leave the viewer.

Even better, for moving around a large text file, you can use the numeric keypad in addition to the cursor keys. If you look on the front of your numeric keypad, you'll see arrows and the words "Home", "Pg Up", "End" and "Pg Dn". You can use these arrow keys in the same way you use the cursor keys and the Pg Up and Pg Dn keys will give you screen-sized jumps through your text file, while the Home and End keys will jump you to the start and finish of the text file respectively. In fact, you should try these keys with some of your other applications – notably web browsers – since more and more seem to be using them as handy shortcuts for commands.

ONLINE HELP

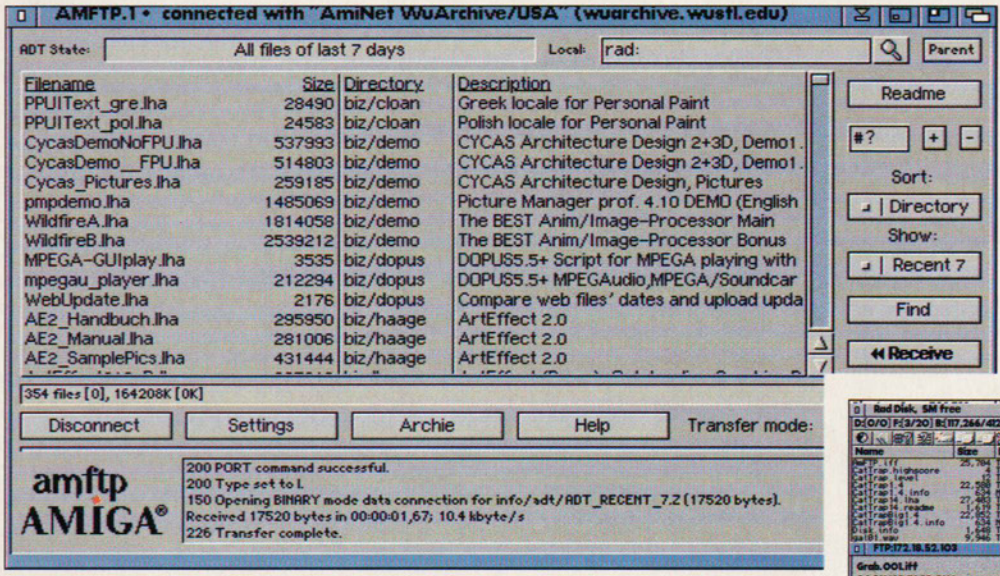
Okay. So the first thing that everyone tries when they're stuck is to hit the help key. What you might conceivably not know is that it is context sensitive. If you have your cursor over a particular object in *DOpus*' arsenal, the online help file will automatically access the topic concerning the object your pointer was over, when you hit the help key.

KEYBOARD NAVIGATION OF LISTERS

I wouldn't recommend it for extended use since it's a bit cumbersome, but *DOpus* allows you to use listers without a mouse. If you have a name mode lister active, hit the space bar. This should shunt all the text in that lister to the right, to make space for a little arrow. You can move this arrow around using the cursor keys or the navigation keys listed for the text viewer. If you hit the 'Return' key (on the main keyboard) you will select the file or directory that the arrow is pointing at, and if you hit 'Enter' on the numeric keypad, it will react as though you double clicked on the entry with the left mouse button – entering a sub-directory if you are over a directory entry, or performing a file action if it is over a file. If you have entered a sub-directory and want to get back out again, then you can hit the 'backspace' key to bring you back up a level, or the ';' key to bring you to the root of the device you are browsing.

If you have a huge list of files and you wish to have the lister scroll to that area, you can do so by simply typing the first letter(s) of the files/directories you are interested in and *Dopus* will scroll as close to the entry as possible.

If you have more than one lister open and you wish to navigate between them, hitting the tab/shift-tab combo will cycle backwards and forwards through all the available listers (ie, the ones that aren't busy).



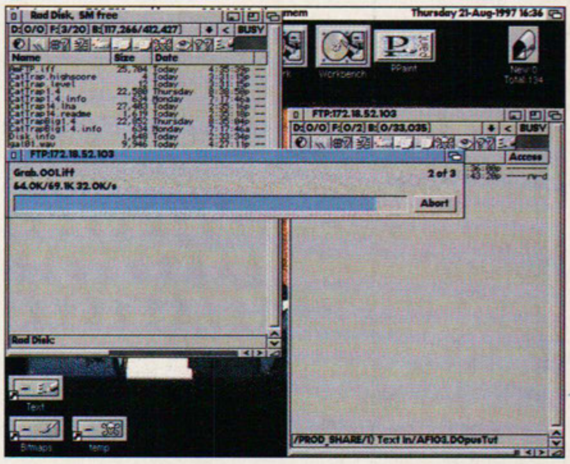
Although *DOpus*' FTP functions are great, you'll still need to resort to *AmFTP* for ADT functions.

> **"Setting up a button for your favourite FTP site is simplicity itself now that you know what all the DOpus FTP commands do."**

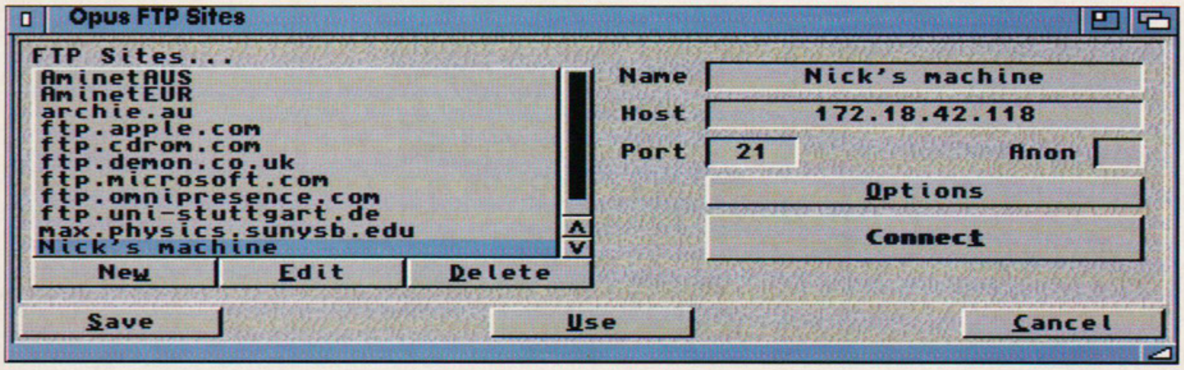
hidden (you can't use "~(#?.readme)" for instance).

DOpus' FTP command set also includes the resume function – very handy if you crash in the middle of a download, but you have to be sure that the server at the other end supports this function too. The Aminet sites I have tried all do, but Future's own FTP server sadly does not.

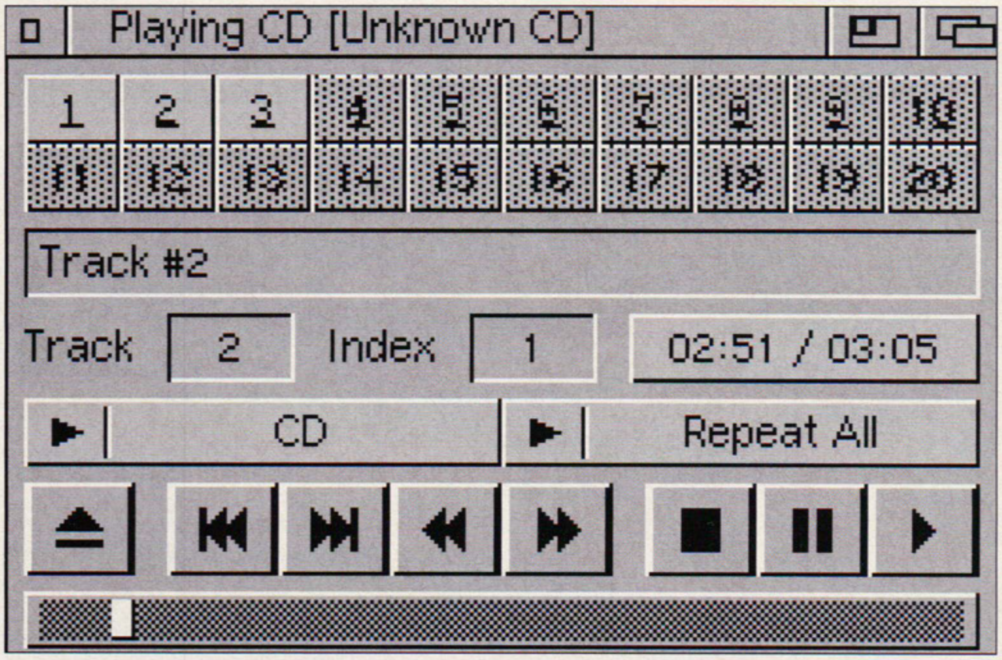
We use *DOpus*' FTP functions for connecting to sites all over the place with one major exception. *DOpus* doesn't support the ADT server function of the Aminet sites. This means that we still use *AmFTP* to find files that have been recently uploaded to Aminet, but for anything older, *DOpus* is often faster to retrieve directories and download the files than *AmFTP*.



With FTP as transparent as normal copying functions, file transfers are so simple.



If you haven't already upgraded, here's a sneak peak at *Magellan*'s much nicer FTP address book.



CD player programs allow you to control the CD as if you were playing it on a conventional stereo. You'll find a selection of programs on Aminet but the one you choose really depends on its compatibility with your drive.

Single-click on the CD0 icon and select 'Information...' from the 'Icon' menu. You will see a requestor with tooltypes that you can edit. Say, for example, you had a Rapidfire SCSI-II board, you would have to change the 'Device' to 'dkbSCSI.device' and keep the Unit' as '1'. Please note that this is an example of only one type of interface, and others will differ and that case is important when entering device details – DKBscsi.device is not the same as dkbSCSI.DEVICE.

"You can now turn a reasonably equipped Amiga into a library of resources."



The AFCDs – again! [I think we may have plugged them enough – Ed]. Can you really afford to miss out?

NEW HORIZONS

Once this is sorted out the CD will behave like any other disk (except the read-only status), appearing as an icon on your Workbench. If you have *Workbench 3.1* you'll have a driver which you'll find in the Storage drawer or disk (Docdrivers/CD0). To use it, you will need to copy it to the Devs/DOSDrivers drawer of your Workbench disk. There are several PD drivers available (eg, *AmiCDFS2*) which may be slightly harder to install but do an excellent job!

Once you have your CD-ROM drive up and running, you'll be amazed by its diversity. Providing the drive is compatible, you can play music CDs on it – controlling and accessing CDs through Workbench and choosing songs from a list of names, not numbers.

CDs can also be used to store films and video – particularly MPEG movies. The Amiga happily caters for these when fitted with a decoder (about £200) which enables you to access films through the CD-ROM.

So, what great changes has the CD revolution brought to software? Their big storage capacity means you now have massive programs or compilations, along with lots of support files. Digita's *Wordworth 6 Office* includes all the latest Digita software and loads of extra fonts and clipart. For the DTP (Desktop Publishing) user, CDs provide endless libraries of fonts and clipart for inclusion in documents – eg. the excellent *Phase One* and *Phase Two* discs from EMC. (Free with *AF99* and *AF100*).

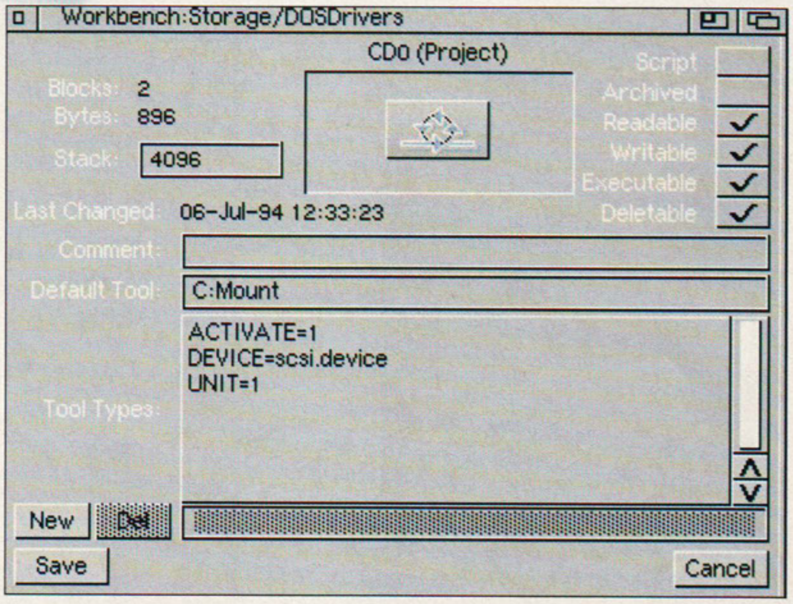
THE CD REVOLUTION

Other resource CDs are designed to enhance the user's creativity, packed with samples, pictures and animations. CDs are also the key to the Amiga's famous multimedia ability. Large animations and sounds can be stored and played without a pricey hard disk.

Recently, far more unique titles have been appearing on CD-ROMs. Interests ranging from 'Women on the Web' to the 'Encyclopaedia of the Paranormal' are all being catered for and, now that CDs are reasonably cheap to produce, the trend looks set to continue.

If you needed any other reason to buy a CD-ROM drive then the *AFCDs* should swing it! They appear on our cover every month and add masses of software to every reader's collection.

The CD-ROM drive is a great step forward. For very little money, you can turn a reasonably equipped Amiga into a library of resources. The CD version of a program usually comes with numerous bonuses such as extensions, support files and examples. The future of the Amiga lies in its ability to keep up with the competition, and since CDs are now used on (almost) all other computers, buying a CD-ROM drive is an ideal way to support your favourite machine while vastly improving your software collection at the same time!



The Commodore filing system is notoriously unreliable (anyone remember *AFCD5*?) but there are some very good PD drivers that you'll find on the *AFCD* every month.

Advanced ARexx Coding

AFCD19:-In_the_Mag-/ARexx

ARexx Interrupts

Paul Overaa explains about ARexx's built-in break/error signalling mechanisms...

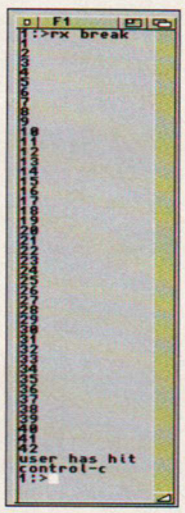
You all know that if there is a syntax error then ARexx will react as soon as it encounters the offending statement. In this case ARexx automatically breaks in to stop the script from running. You can also deliberately stop a running script by typing CTRL-C and both of these situations are part of a more general 'interrupt' scheme supported by ARexx.

ARexx's interrupt facilities are extremely useful because they make it possible for a script to take control of what happens when a variety of error &/or break conditions are encountered. One important use of ARexx's interrupt mechanism is in providing what are known as 'safe program exit paths', ie, a set of statements carried out before a script terminates to ensure that everything that should happen before a program terminates, does happen!

As far as the allocation and de-allocation of memory, or any other system resources are concerned, ARexx itself is very well behaved. If an ARexx function is used which allocates any type of system resources, then ARexx will see to it that those resources are handed back to the system, before the script terminates. It also does things like closing any open files you forgot about.

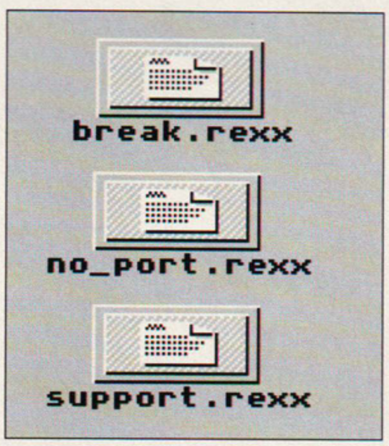
Exit path code does become useful once you step outside of ARexx's normal statements and functions. Supposing your script makes use of the rexxsupport library in order to allocate some chip memory for use as a buffer. Under normal circumstances your script would (or should) call the appropriate functions for de-allocating that memory before it finished executing. But if, say, because of unexpected termination this de-allocation job was not carried out, then that chip memory would be effectively lost until you rebooted.

"At the very least this allows a script to close itself down in a 'controlled' manner..."



ARexx's interrupt facilities are surprisingly easy to use once you've seen it done!

Luckily, these situations are easily handled and by enabling suitable interrupt signals, programs are then able to take their own corrective action. At the very least this allows a script to close itself down in a 'controlled' manner and might actually prevent a visit from the Guru!



You'll find three separate examples on this month's Coverdisk.

MAKING A START

The various interrupt sources are shown in **Table 1** and ARexx provides a SIGNAL instruction which enables these sources to be selectively turned on or off. When an identifiable interrupt condition occurs, control gets passed to the appropriate interrupt handler – but that's not all that happens. Two special variables, called SIGL and RC get affected as the interrupt occurs: SIGL becomes set to the current line number before the transfer of control takes place. RC gets set to the appropriate return code if an error or syntax interrupt has occurred.

ARexx also dismantles any active loop and control constructs before passing control to the specified interrupt handler so while it is safe to jump out of a loop, it is not actually possible to jump back into it again. It is only the control structures within the immediate environment which are dismantled (so it's possible to use SIGNAL instructions inside the function call code without it affecting the caller's environment).

In order to use ARexx's interrupt arrangements you need to make the signal name the label for the interrupt handler code used within your script. In **Listing 1**, I've added some custom control-c break handling code by using a 'signal on break_c' statement. This is also the label for my associated break handler code and, if you run the program, you'll find that hitting CTRL-C while the loop is executing will result in the program giving the message

TABLE 1

BREAK_C	traps an AmigaDOS control-C.
BREAK_D	traps an AmigaDOS control-D.
BREAK_E	traps an AmigaDOS control-E.
BREAK_F	traps an AmigaDOS control-F.
ERROR	traps errors indicated by non-zero command return values.
FAILURE	traps command return codes greater than current FAILAT level.
HALT	traps externally generated script halt requests.
IOERR	traps I/O errors.
NOVALUE	traps the use of uninitialised variables.
SYNTAX	traps most syntax and execution errors.

● ARexx's defined interrupt sources

LISTING 1

```
/* break.rexx – a simple break trap
example... */
signal on break_c /* cause a branch
to my script's own control-c handling
routine */
do i=1 to 4000
     say i
end
quit:
exit /* end of main program */
break_c:
say 'user has hit control-c'
signal quit
```

● Simple break interrupt handling

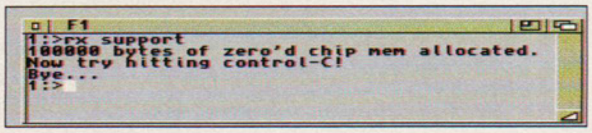
LISTING 2

```
/* no_port.rexx – a syntax trap example... */
signal on syntax
address 'somenonexistentport'
/* now try and send a command to the non-existent port... */
'hello port'
quit:
exit /* end of main program */
syntax:
if rc=13 then
   do
      say 'sorry – there is no port available called...'
      say Address()
      say 'you need to have the utility which sets up this port'
      say 'up and running BEFORE you execute this script'
   end
signal quit
```

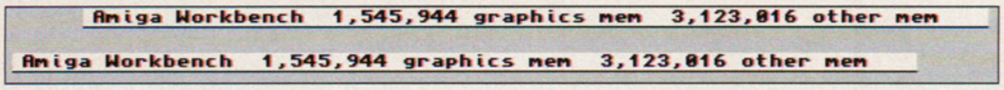
● A 'missing host' error detection interrupt example

outlined in the break handler code before terminating.

There are plenty of uses for these types of arrangements. Those of you who get fed up with seeing the 'Error 13: Host environment not found' messages that appear if the port associated with an external host cannot be found, could trap this error and add



Scripts using libraries that contain functions for allocating memory etc, will always benefit from the inclusion of safe exit pathway code!

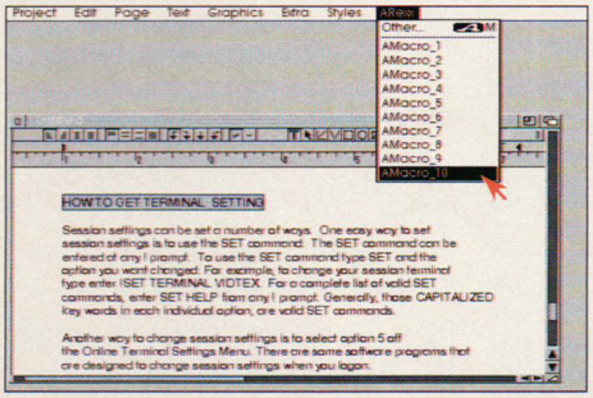


It's easy to check for memory loss from the top of the WB display.

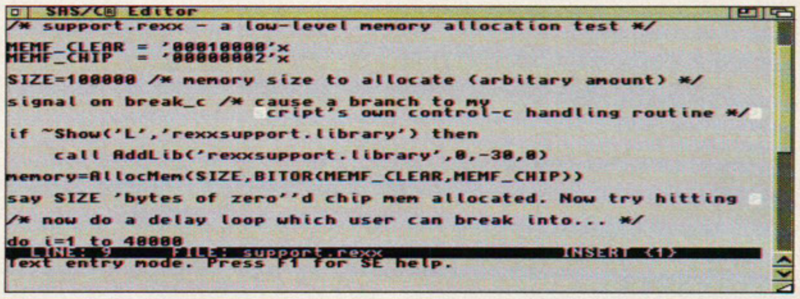
an alternative message suggesting a suitable course of action (**Listing 2** gives some bare-bones code for such an interrupt handler).

AN EXAMPLE

By using AllocMem() and FreeMem(), the low-level memory allocation/de-allocation functions present in the rexxsupport library, it's easy to show how to force a script to close down properly, even when a user prematurely halts the script via CTRL-C. You do need to know a bit about how these functions are used, in order for the example to



These interrupt facilities will work with macros and ARexx scripts.



The best way to get the hang of system flag use is to see some working code!

make sense. The big advantage of AllocMem() is that it provides control over the type of memory being allocated by using the same 'flags' as the underlying Exec library routines. You will often see these values given in decimal form like this...

Public Memory	**1**
Chip Memory	**2**
Fast Memory	**4**
Clear Memory	**65536**

As well as wondering about the purpose of the numbers you may well be asking what a 'flag' is and the decimal forms of flag values tend to hide their real meaning. In the computing world flags are simply bits present in a variable, or perhaps a microprocessor's hardware register, which have been assigned as a 'marker value' for some specific purpose. They are yes/no (true/false) type indicators which require just a single bit of storage space.

A longword (four bytes) of memory can therefore act as a store for up to 32 different flag values. By convention, if a flag bit has the value 1, then it is said to be set (or 'true'), and if the bit has the value 0 it is said to be clear (or 'false').

As far as memory allocation is concerned a number of standard flag values are provided in the exec/memory.h and memory.i system include files. ARexx coders do not need to concern themselves with these files except for the fact that they must use the standard memory attribute flag values when allocating memory. The bit position definitions of the most common memory attribute flags in binary form are these....

MEMF_PUBLIC
0000 0000 0000 0000 0000 0000 0000 0001
MEMF_CHIP
0000 0000 0000 0000 0000 0000 0000 0010
MEMF_FAST
0000 0000 0000 0000 0000 0000 0000 0100
MEMF_CLEAR
0000 0000 0000 0001 0000 0000 0000 0000

and translated to ARexx hex form these become...

MEMF_PUBLIC	'00000001'x
MEMF_CHIP	'00000002'x
MEMF_FAST	'00000004'x
MEMF_CLEAR	'00010000'x

So to allocate chip memory you'd need a flag value of '00000002'x. To allocate and zero a particular memory block you just combine the appropriate memory type and memory clear flags. The string '00010002'x for instance, would allocate cleared chip memory.

Once you've got the hang of the general principles, memory allocation is easy enough to do but embedding numbers in the way I've just described is bad practice. A better approach is to define some pseudo constants, ie, fixed variables, that act as constant values. I tend to adopt upper case conventions...

MEMF_PUBLIC	= '00000001'x
MEMF_CHIP	= '00000002'x
MEMF_FAST	= '00000004'x
MEMF_CLEAR	= '00010000'x

With these definitions in place scripts can then use expressions such as BITOR (MEMF_CLEAR,MEMF_CHIP) to produce the required flag value combinations needed for AllocMem().

This approach allows you to write ARexx code which makes it very clear which flags are being set. The statement:

```
AllocMem(100000,BITOR(MEMF_CL
EAR,MEMF_CHIP))
```

leaves you in no doubt that 100000 bytes of cleared chip memory are being allocated!

Before any external ARexx library can be used, ARexx must be told that it exists. This is usually done by adding the name of the library to ARexx's internal library list, using the AddLib() function. The parameters expected by AddLib() are the library name, a priority value (usually 0), an offset value (normally -30) that specifies the library's 'entry point', and a version number...

```
call AddLib('rexxsupport.
library',0,-30,0)
```

It's normally a good idea to use the built-in Show() function to find out if the specified library is already in the ARexx library list before using AddLib(). Therefore...

```
if ~Show('L','rexxsupport.
library')
then call
AddLib('rexxsupport.
library,0,-30,0)
```

would enable us to use any functions available in the specified library.

See the script on the Coverdisk for more help but you should find this area quite straightforward and it shouldn't take long for you to come up with ideas



MailBag

Send your letters to: Letters To The Editor • *Amiga Format* • 30 Monmouth Street • Bath • Somerset BA1 2BW or email to: amformat@futurenet.co.uk – putting 'Mailbag' in the subject line.

DIGITIZED

I would ask you to print something that suggests that people do not write in to Digitizer because they make insulting remarks about Amiga owners – after a lengthy USENET thread I thought of this idea in the hope that there is a miniscule chance that their sick joke may be slowed down or even brought to an end once and for all. Enough is enough.

Basically, I have realised that Digitizer are deliberately provoking Amiga users to write in complaining in various different ways, then they print a few of the more ridiculous mails that they receive and use it as an excuse to write yet more insulting comments about Amiga users. Perhaps if no-one wrote in when they decided to make these various comments and remarks, they would be hard pressed to make yet more ridiculous comments about Amiga users, based on the letters they receive. Perhaps then they'll move onto insulting other computer owners.

Name and address withheld

I am surprised you pay any attention to Digitizer. I don't think any of their "journalists" really know anything about the Amiga. I seem to remember they once broadcast a story that Amiga Format had closed down, and then refused to apologise for their error. I expect anyone who wrote to Digitizer regarding the Amiga would be wasting their time.

TOO TECHNICAL

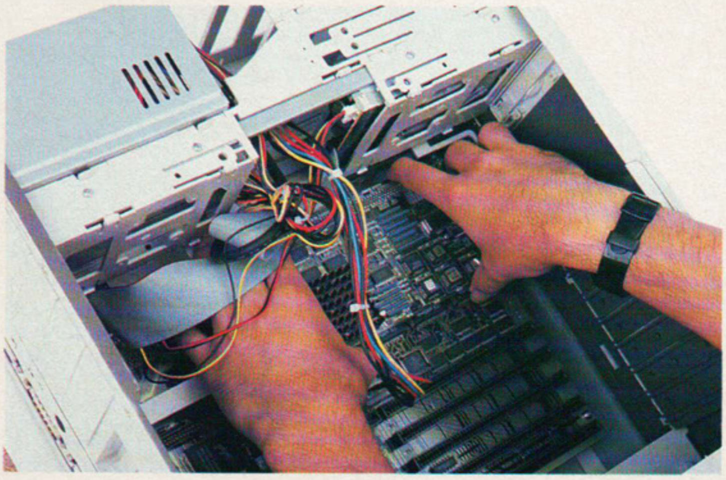
The A1200 tower system would seem to be the future. However, some of us out here are deeply clueless about the inside of our Amigas – which is to say, we can't tell one component from another on the motherboard. Your recent article about effecting a conversion was addressing itself to Amiga buffs in the know. Users such as myself would not attempt the conversion on the strength of that article for fear of making improper connections and possibly cooking the entire board. Please remember that few of us could afford to replace our machines. A double page spread would be nice, with a photo of the motherboard and each component numbered with an identification key.

Lastly, please have the nerve to challenge the pricing policies of your advertisers. It can be demonstrated that, pound for pound, when it comes to buying peripherals, Amiga owners do not get a good deal. If I were buying for a PC, I would be quids in.

Nicolas Flamel
London

I think that the point here is that if you don't know how to attach a few IDC cables, then rehousing your Amiga isn't such a good idea. In fact, you don't actually need to know what the individual components on the motherboard do to rehouse the machine. I expect we can probably do an AmigaGuide file, describing the main board if enough people are interested in it, and put it on disc.

I think your second query was amply discussed in issue 101, the main thrust being that in many cases, Amiga dealers are relied on to test the hardware, and provide Amiga-specific support and software.

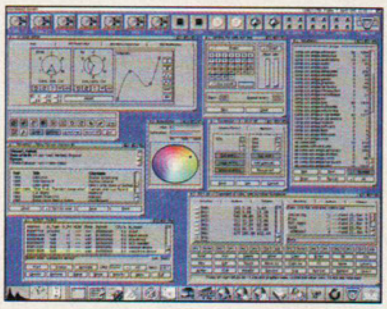


You really do need at least a rudimentary knowledge of your Amiga before you can think about re-housing it.

MUI DISSENTER

I currently use *Expert Draw* for structured drawing and would like to buy a more versatile package. I was extremely impressed with *DrawStudio* but will not, under any circumstances, install *MUI* on my Amiga. It seems to me that the main reason people like *MUI* and *Magic Workbench* is because it makes the Amiga's operating system look 'nice' and lets people impress PC owners. The reason I love the Amiga so much is because its operating system is elegant and efficient – *MUI* is not.





Installing *MUI* is a small price to pay for the excellent *DrawStudio*.

In my experience, PC owners are easily impressed by cosmetics, and are prepared to pay through the nose for this extravagance, but are blind to the sheer beauty of operating systems. *MUI* and *Magic Workbench* go against everything that the Amiga stands for – we do not need a Windows for the Amiga. With 6Mb of memory I can run a word processor, paint package and a structured drawing package – I can't say the same for the PCs at work, which have 8Mb of memory. Can you recommend an alternative structured drawing package to *DrawStudio*?

Victor Bell
York

I take it then, that you are part of the Anti MUI Brotherhood. To be fair, there are some legitimate arguments against using MUI in professional programming, but on the other hand, there are some very good arguments in favour too.

One of the most pertinent in this case is that it does cut down development time. Instead of spending months coding a user interface, programmers can get on with doing something useful with their time. In the particular case you mention, we may well be still waiting for DrawStudio *if it hadn't been*

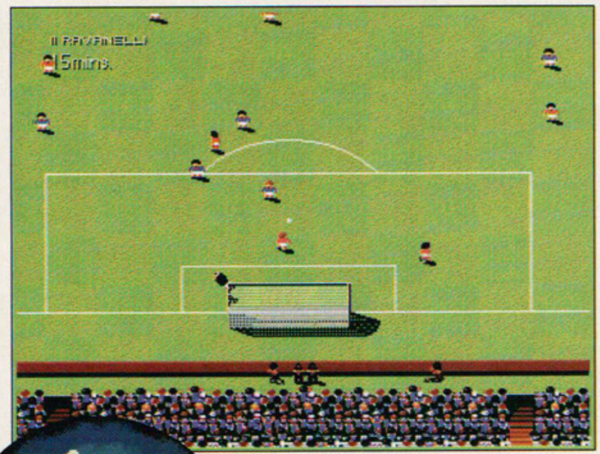
Continued overleaf ➡

programmed with the aid of MUI.

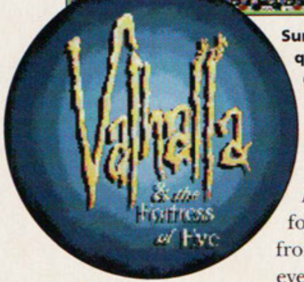
Secondly, I don't think that people use MUI because "it looks nice". Users like to be able to configure their software, and what you probably don't realise (as you haven't registered the software) is the great scope it gives you to determine virtually every detail of any software that uses it. Far from being "against everything the Amiga stands for", I thought flexibility and control were what the Amiga stands for.

Yes, it does mean that you have to install a load more libraries, and it does mean that your software will take up a bit more memory – 6Mb of memory should be plenty. Unfortunately, even without MUI, new software with more features and functions in it generally takes up more room on your Amiga.

I can't recommend an alternative to DrawStudio *which has all of its features, because there isn't one. If you don't want to use MUI, then for the moment you are stuck.*



Surely *Sensi* is excellent as it is – the question here is, can our *AF100* number 1 game really be improved?



CD SENSE

I must let you know that *Amiga Format* first grabbed my attention four years ago, and still stands out from the rest, so thanks to you all. Like everyone else, I'm sick of the constant babble about PCs. I can't buy a decent game where I live, it's all for the PC. Vulcan made a not-bad attempt with the *Valhalla* series. Imagine playing the brilliant *Sensible World of Soccer*, with full commentary, on the Amiga? Go on, Sensible Software, make the ultimate sensi and revitalise the game industry's juices, not a totally bad idea. Speaking of Soccer, not too many issues ago I read your great tips for *Sensible World of Soccer* and found them very useful, but I would just like to add that you should buy Fastino Asprilla from Newcastle United. I know he doesn't come cheap but I am now in my fourth season and I can't believe how good he is.

Ian McAulay
Glasgow

I'm sure Sensi would consider a CD version if they thought it would sell, but what would you put on it? Playing digitised speech through CDDA into the Amiga would take up too much processor time. I think I prefer Sensi *for its solid gaming action. What about the rest of you?*

MISSED OUT

I have noticed that you get a lot of letters asking for tutorials about one thing or another, or asking for re-runs of tutorials.

I myself could really use a *Blitz Basic* tutorial, I think you did one about a year ago, but I wasn't buying *AF* then (sorry). I know I could get the tutorial by buying back issues but I really can't afford the £30-40 it would cost me.

So how about producing a book of all your more recent tutorials plus a few more unusual ones that you couldn't really put in the magazine (a *Killing Grounds* Editor tutorial would be nice)? The book would be mail order only, and you could update it every year. If you sold it for a reasonable price (under £5) then I reckon you'd make a packet on it.

James Rollison
via email

SHOP SHOCK

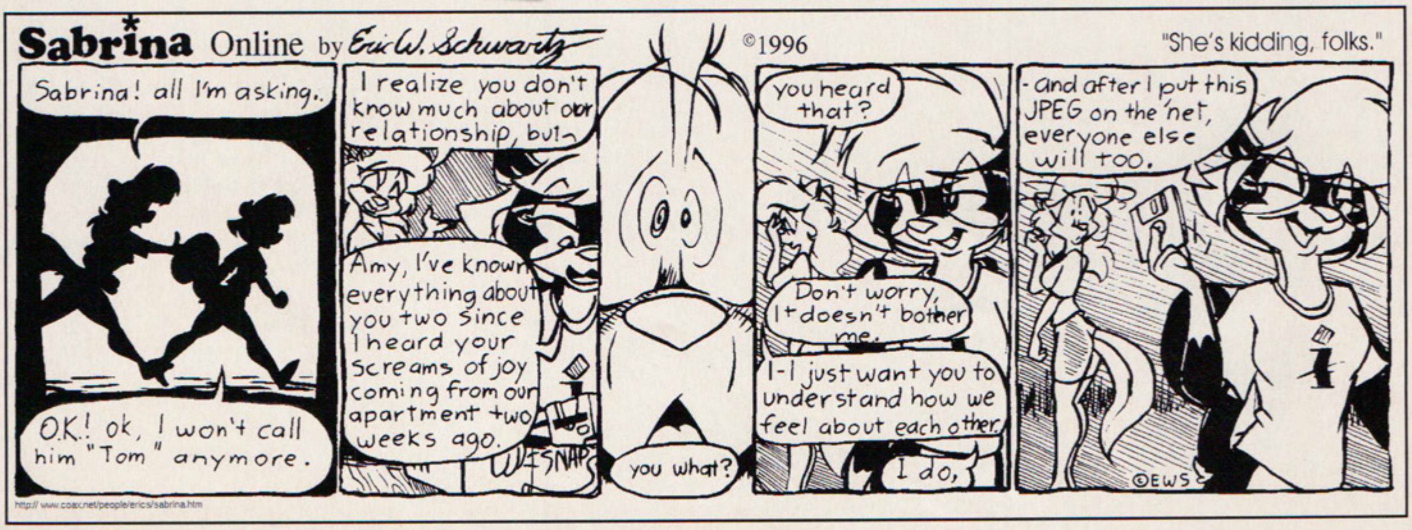
It was months back when I first attempted to link up two Amigas and play a game of *Lotus II*. This gave me the idea of opening an Amiga shop, with several machines linked up for multi-player gaming. With a little help from my uncle we bought eleven Amigas, and I made a few copies of *Lotus II, Stunt Car Racer, AB3DII-TKG* and *Super Skidmarks II*. Now, my uncle's place is a great hang out for Amigans, from eight-player action in *Skidz II* to the battles of *AB3DII-TKG*. Tomorrow is the biggest day in the shop's history, we're going to have an *AB3DII* battle of fury – so far there are 27 contestants signed up for the game of their lives. Can you tell me if there are any other good games for link-up fans? Is *Battlecraft* going to have link-up options? And do you know of any modem games for the Amiga?

Ahmad
via email

Well, that is really a great idea. Unfortunately, you forgot to tell me where the shop is... Please keep us informed of future events – we may even be able to arrange a visit there ourselves at some stage.



There have been on-going *Blitz* tutorials in the mag for two years.



CARING AND SHARING

On the subject of Shareware registration I've made a total of sixteen payments (all by pushing the appropriate currency notes in a letter) and all except three were acknowledged. Those that weren't were all to Martin Berndt – strange that you used a screenshot of one of his Shareware notices as an illustration to your article. Has anyone actually triggered a response from him?

Ken West
Deal, Kent

SHARE AND SHARE ALIKE

This is an attempt to raise a debate around a favourite subject of mine: Cashing-in-ware. Cashing... what? you might ask; cashing-in-ware is my word for a large percentage of the products that are released into the Shareware realms. I won't mention names but some programs are clearly not worth the Shareware fee. Who would pay £10-15 for GUIs, for programs like *DMS, LhA/LZX/Zip*-archivers and the *Format* command? Anyone with a minimal knowledge of the DOS.library system() routine, a copy of *Blitz Basic 2* (or *Amiga E*) and the ability to move a mouse can load up GadToolsBox or MUI-Builder and do the trick in a couple of hours.

This is not so bad but when these programmers "cripple" their demo versions they are damaging the support for all the good Shareware out there. When you buy a new CD-ROM a lot of the programs on it are crippled, mostly with an annoying requestor, and when you wade through the programs it becomes natural to wait for ten seconds before you can check out the program on offer. Thus you really don't notice the requestors any more. This has led to programmers using even more cunning tricks to help people to decide to register: a special trial period, a max number of entries or the disabling of print/save functions. This means that I (and those of my friends who use PD software) now check whenever I encounter a new piece of PD, seeing if it is Shareware and then scanning the documentation for words like "limitation" and "demo". If I decide that I can live with these limitations, okay but if not I don't even try out the program.

My plea to these Shareware programmers: before you decide to demand £10-£30 for your new program, consider this. Would you pay this kind of money for the program yourself? Are there better alternatives out already which cost half the price you're demanding? This applies especially to games – you can buy *PowerMonger, SleepWalker* etc. for less than £8 if you shop around. Do you think anybody would pay £20 for another version of *Pacman* meets *Space Invaders*? By the way – I'm a Shareware and Freeware programmer myself.

Søren Holbech
Denmark

Well, you might have a point, but the authors have the right to charge for their work, no matter whether it's good or not. Being able to try the software is the whole point of Shareware – you wouldn't buy it if you didn't know what it could do. If the Shareware isn't crippled, then authors usually find that they don't get very many registrations at all...



Now really is the time to subscribe, with our special discount offer

Well, we ran a tutorial on Blitz Basic *(in fact two tutorials) for nearly two years. We have also run a tutorial in the magazine, for* The Killing Grounds. *So the solution is not to buy books, but to read the magazine.*

We are looking at putting tutorials on our website and on the CD, but I'm afraid books are more or less out. There are too few outlets for them, and in the past they generally end up costing us too much to produce, because it is too difficult to estimate how many will sell.

SUB CULTURE

I have been a subscriber to your excellent magazine for quite some years, in addition to...ahem...a couple of others. Due to the subscription rates I can no longer afford to go to bars and look for lonely and desperate women! Because of this, two local bars have filed bankruptcy (honest). Anyway, just to let you and the PC Infidels out there know that I am and shall remain a die-hard Amigan. I would rather take up basket-weaving before I convert to Pee Cee!

Keep up the good work and do enjoy your British sense of humour. Until next time I remain,

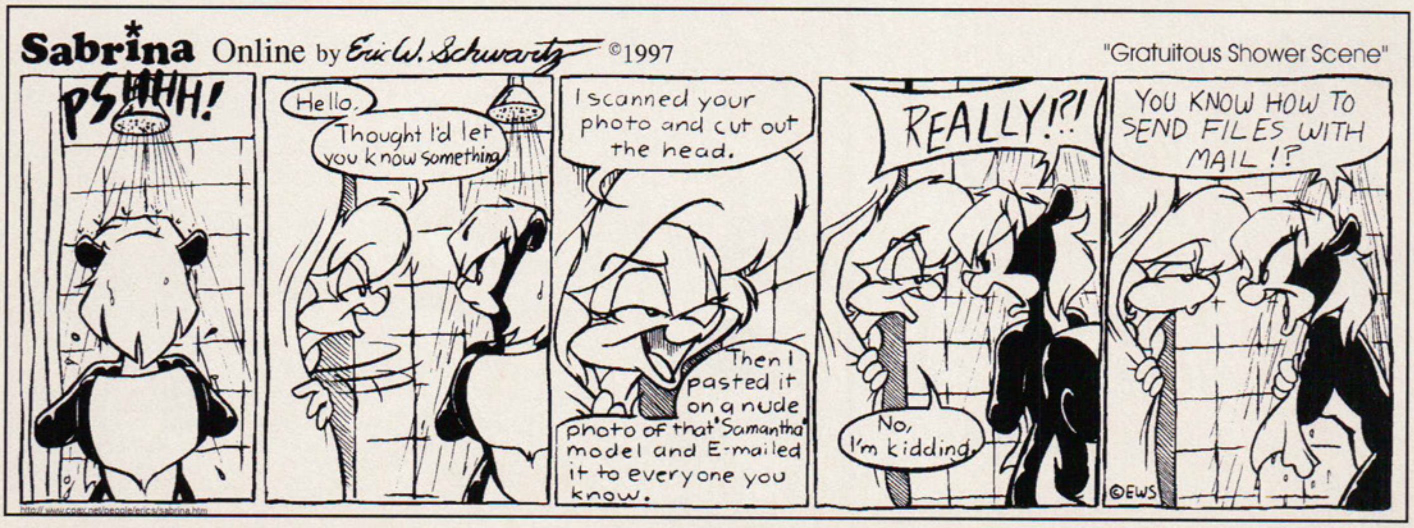
Antony E. Bodo
Lake Station, Indiana

Well, I hope our new cut-price subscription offers will enable you to once again bolster your local economy.

WHINE, WHINE, WHINE

After reading Louise Hart's letter (*AF101*) complaining about Mr Gell's letter (*AF96*) I just had to write in myself. Mr Gell is quite right, in my opinion. I for one am sick of playing games like *Scorched Tanks*, designed to run on slower machines. Only now are games like *Nemac* and *Genetic Species* appearing which are better to play. I own an A1200 50Mhz '030 with 16Mb RAM – which is good enough to run brilliant games. In your letters pages, someone else said something like 'give

Continued overleaf ➡





OVER THERE

Hello everybody. I live in Norway and like many others, am worried about the future of the Amiga. I have noticed that there are less and less stores stocking Amiga equipment. I never got the chance to buy a tower or a Zorroll 2 for my A1260, so my upgrading is going slowly. I have to look outside my country to get the stuff I need, which is a sad thing. Can you give me the addresses of some stores in the UK?

I hope you programmers out there will help get the Amiga back on track. Imagine some software that was fully optimized for the 68060 processor and its co-processor; that would make people understand just how fast the Amiga really was, and would perhaps stop so many leaving the Amiga market. People with PCs get to play games in real-time with smooth, Hi-Res graphics. If only someone would make 3D cards that were capable of running these top quality games on the Amiga, more people would stick with the 'Dreammachine'.

Keep up the good work, remember: the future of the Amiga depends on people like you owning and keeping your Amigas. Please don't leave this nice machine.

Roy Krister Ellingsen
Norway

EASTERN PROMISE

I am an Amiga owner and subscribe to your great magazine from overseas. In recent months I feel that those Amiga fans who don't live in Europe or the USA have been left out. My suggestion is that you at *AF* do a special feature about what's been going on in the rest of the world, as far as the Amiga is concerned. I would like to see more names of Amiga suppliers and distributers in the Middle East, (I am from Israel) and in other overseas areas also. I'm looking forward to a positive answer, Nick, so don't disappoint me!

Sry Nimtsan
Israel

The trouble is that most Amiga developers, with the notable exception of GP Software, are based in the USA or Europe, and that tends to be where the biggest Amiga scenes are. If you know of events happening in your countries, or of software developers or of anything interesting and Amiga-related, please let us know.

As for distributors and dealers, we would be able to help if all you overseas readers had actually tried to help yourselves! Almost a year ago we asked people to write in about shops local to them who stocked a range of Amiga hardware and software. We have received loads of info from the UK, but only one response from overseas. Tell us about Amiga distributors in your countries and we will incorporate them into our dealer database, which should appear in the mag very soon.

← software developers the freedom to produce games without the 14Mhz, 2Mb limit'. Too right!! What happens to the people with slow machines when everybody with A1200s start upgrading to 200Mhz and 64Mb RAM? And would A500 owners STOP COMPLAINING!

Adrian Mackenzie
Ross-shire

Having some notional limits does help focus the programmers' minds on making their games efficient as well as good. I mean, you don't want to end up with sloppy code. But many games programmers these days are ignoring the 2Mb/'020 limitations imposed by the A1200. I suspect that it won't be long before you see some games that require (shock) a graphics card...

MISSING YOU

I would be very grateful if anyone out there can help me with a problem. I recently bought an Amiga 4000/'030 from my brother-in-law but unfortunately he has mislaid the reference and user manuals for the computer. I have tried everywhere to locate these manuals without any success. Perhaps there are AF readers out there who can help me?

G. Roderick
113 Pelsoll Lane, Rushall, Walsall, W.Mids, WS4 1NE

We don't actually have any manuals for the A4000, but some friendly reader might like to get in touch. If you have any specific queries, you are quite welcome to write in to the Workbench section of the magazine.

SOUNDTRACK OUT NOW

Picture the scene, if you will. On your black TV screen appears an image which is hard to make out. The camera zooms out, accompanied by some suitably dramatic music, (Beethoven, Stravinsky) to reveal a tower case computer. 'Looks impressive', thinks the viewer, 'yet another PC advert'. Then the classical music is replaced by some noisy guitar (Sex Pistols, Offspring) and the viewer is bombarded with images of the computer being used: *Personal Paint, Art Effect, Worms DC, Flying High, Myst, Epic Encyclopedia, Voyager NG.* As the viewer waits to be told where he can buy this 'new' PC the black backdrop bursts open to reveal a spinning, rendered 16.7 million colour Amiga logo.

I can see it all now. I just hope Gateway can too. Where do you want to go today? Amiga please, Mr Gates.

Gerald Mellor
West Lothian

It's funny how many letters we get suggesting ideas for new TV ads. Have any of our readers actually bought an Amiga because they saw a TV ad? The trouble with TV advertising is that it's expensive, and unless you show the ad several times a day, it has little or no effect. Would the money be better spent elsewhere?



LOAD OF TRASH

What would I like to see in a new operating system? Well most of my demands refer more to surface level rather than inner workings. I would like to say though that I disagree with Ben Vost's idea that there should be four chips for graphics, starting at 8-bit. We've already got 24-bit, even if we can't see them all at once, so this idea would force people to spend more money to get up to the old standard – hardly fair. I think that it should start at 24-bit, preferably 27-bit (9 bits per plane).

I'd like simple things such as an equivalent of the Mac's 'Alias' feature or its Apple icon. I'd like to be able to resize windows by dragging out the edges and I'd like to be able to bring a window to the front by clicking on it. Window requestors should be centred on the screen and there should be a built-in screen saver.

Three-button mice should be supported as standard as should very high-density floppies, double density CDs and the Advanced Photo System film cassettes.

Lastly, get rid of the Workbench trashcan and lets have a desktop, system-wide one (again, like the Mac). Apart from that, I think Ben covered just about everything else – on the software side at least. Basically, lets just make sure that we can fart in the general direction of PC owners and throw livestock over them from catapults!

Adam Shailer
Kent

Some interesting ideas, but DDCDs are already a format of the past, and what about an internal Zip drive as standard? There is already a built-in screen saver (check your commodities drawer). Many of the other things you mention are available as hacks and commodities too, but would benefit from being embedded in the system.

But I'm afraid your trash idea is just trash. Does anyone use the trashcan? Does anyone really want large parts of their disks taken up with nonsense which they can't see? It fragments disks, it takes up valuable room and it's crap.

The Gallery

ON THIS MONTH'S CD

Another chance to show us what you can do. Get those masterpieces to us, quick as you can.



Keith Hannen – Rover
Unfortunately Keith tells us little about this lovely picture other than how long it took to render. What's the blood Keith?

Lee Martin – Flowers in vase
Another *Cinema4D* image this is nicely composed and the soft shadow around the vase makes it look gorgeous.

£50 winner!

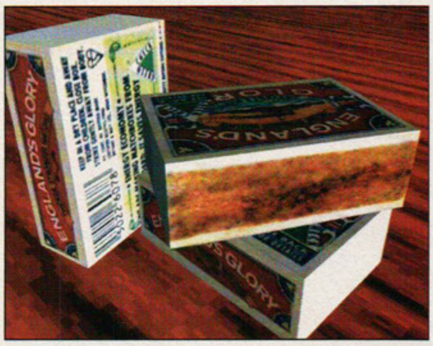




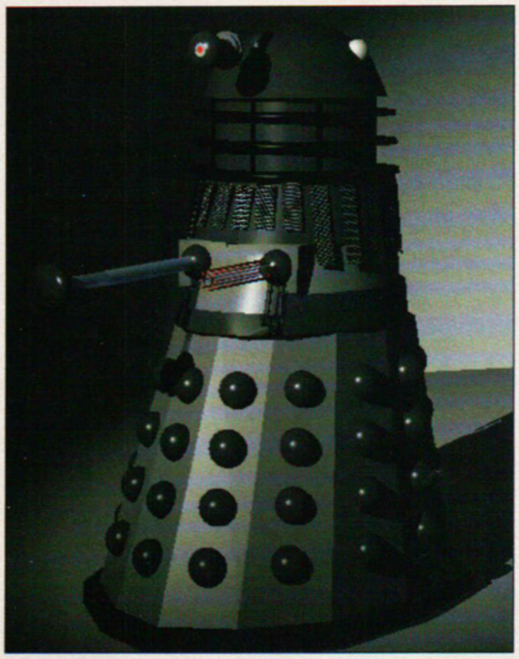
Darjet Shah – The Crow 1996
It's a great shame the follow-up movie wasn't half as good as this picture from Darjet.



Stephen Thornber – England's Glory 2
Nice use of your scanner here Stephen, but you should look a little harder at your next box of matches. Notice that the sleeve actually has eight sides where the cardboard is folded.



Ross Hunter – Cotehele
This looks like a nice place to stay but Ross doesn't give us any details on his inspiration or what he used to make the image.



Kevin Walker – Dalek
A few people say that *Cinema4D* is too hard to model anything in, but Kevin proves them wrong with this picture of Dr. Who's nemesis.



Douglas Bayley – Doom
Douglas regales us again with his intensely layered style in this image.

Reader Ads

A veritable market place for Amiga-related goodies. If you've something to sell or you're looking for a bargain then this is where it's at!

For Sale

● **Almost complete** set of Amiga Format mags with original disks and subscriber disks. (missing numbers 1-5 and 8 – but have those disks). ☎ Michael J. Hurst on 01705 752004

● **A1200** 10Mb, 1.76XL DD, 1.3Gb HD, as new, all boxed, loads of software: £525. Also A500, 1Mb £49. ☎ Nikki 01873 890255 (evenings).

● **A1200** internal disk drive £20. Keyboard £17. Power supply £27. ☎ or Fax 0121 441 3064. Ask for Phil.

● **Apollo 1230** Lite 68030 with 4Mb (not upgradeable) and Breathless £40. Various Amiga software inc. Gloom Deluxe, Worms – offers. ☎ Mr McGouran on 01299 401334

● **Apollo 1220** accelerator, 28MHz with FPU, clock and 4Mb SIMM. 15 months old. Priced to sell due to upgrade. £40 including postage. B. Kupris, bkupris@thenet.co.uk Oban ☎ 01631 563366

● **A3000**, 100Mb disk – very expandable, £250 ono. ☎ Simon on 01256 703301

● **Breathless** £15, Hook £10 (£20 for both) ☎ Jonathan on 0121 744 4727

● **A600** Wild Weird Wicked pack, boxed with joystick £90. ☎ 01905 429167, ask for Ade.

● **Amiga 2000** with HD '030 accelerator, CM8833 monitor, spare floppy drive £400 ono. ☎ 01622 725402 any time.

● **Amiga SCSI-2** interface 4091 £100, Octagon £40, SX32 Xpander for CD32 w/8Mb SIMM and 176Mb hard disk £160. ☎ Paul on 01570 423221 (day) 01570 493440 (evening) Wales.

● **Aerochopper R/C simulator** £90, MicroText Teletext adaptor £45, A4000 PC keyboard adaptor £15, GPFax £37, Real 3D 2 £75, Final Copy 2 £35. ☎ 0442 218115/65213

● **Viper 1230**/2828MHz, 68030+68882 4Mb RAM, disables PCMCIA slot £50 ono. James Hudson • 50 Sandown Drive • Herne Bay • Kent CT6 8QJ

● **Apollo 1240**/40MHz board for A1200 and tower systems £190 ono. Nearly new. ☎ Ben Cooper on 01722 710113

● **Commodore CDTV** with keyboard, external disc drive, plus A500 complete with lots of games and utilities. Offers welcome or exchange both for A1200. Also back issues of Amiga Format with disks. ☎ Colin on 01206 769756.

● **Amiga CD32**, two hand controllers, PSU plus 23 games £125 ono. 44-pin to 40-pin IDE interface board £10 ono, 26 original games £3 to £7-50 or £125 all. ☎ Terry on 01709 814296.

● **Zorro 2286** PC bridgeboard with drive, software and manuals £90. Zorro 2091 SCSI controller, Quad speed CD-ROM and Quantum hard drive £90. Zorro 4Mb upgrade £30 or £200 the lot. ☎ Mr Fisher on 01263 824396.

● **Monkey Island** 1/2 £10 each, Wing Commander £5. ☎ Robert on 01663 74228.

● **A1200 memory** expansion 2Mb with FPU 33 MHz for £25. email Nicolas Katsidis at paladin@econ.auth.gr

● **1.2Gb 3.5" IDE HD** + S/W £95, OS 3.1 £50, (A4000) 6 speed IDE CD-ROM drive £40 (all new). Buddha A4000 IDE interface £40 (new). David Hogben • 128 Gaston Way • Shepperton • Middx • TW17 8ES.

● **Blizzard 1230**, 50MHz '030 plus 50MHz 68882 FPU £75 bare or £175 with 32Mb. ☎ 01270 650691 day or evening, p&p included!

● **Vital Light** – unopened and still shrink-wrapped £10 or will swap for any other game. Contact Stephen Graham, PO Box 8583 • Largs Ayreshire • Scotland • KA30 8HG.

● **A1200** with 33 MHz 68040, 16Mb RAM, 120Mb IDE hard disk, Squirrel SCSI CD-ROM, 1438 Amiga monitor plus sound sampler, £1000+ of games, CD-ROMs boxed £600 ono. ☎ Andrew on 01724 294190.

● **Campaign 2** £10, Dawn Patrol £10, Trolls £5, Football Glory £7, Indianapolis 500 £5, Benefactor £5, Space Quest 3 £5, Silent Service 2 £8. Please add 50p p&p if original box is wanted. ☎ Adam on 0161 624 7058.

● **Real3D** Coverdisk and manual, Master Amiga ARexx, Master Amiga Amos, AF Ultimate Amos, Amiga Games Maker, Master AmigaDOS

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Bath • BA1 2BW

Unfortunately we cannot guarantee insertion in a particular issue.
I have read and understood the conditions for the inclusion of my ad

Signature:..............................

Use one space for each word. Only the words in this section will be printed

Free!

Scripts. Offers for above. Easy Amos £15, Amos Professional £20. ☎ Bolton 01204 406940.

● **Blizzard** A4030 CPU card for A3/4000. Features 50MHz 68030 and 68882. No SIMM sockets or other expansion options. £50. UK only please. ilya@enterprise.net

● **GVP SCSI** controller card for the Amiga 2000, 3000 or 4000. Complete with manual, as new £80. ☎ 01282 862363.

● **CD32** and SX32-Pro 030/50, 4Mb fast RAM, disk drive, keyboard and games including Roadkill, Guardian, AB3D 1+2 and others. Great fast system – £500. Money needed to upgrade my A1200. ☎ Ken 01526 378563.

● **Citizen 120D+** dot matrix printer. Includes tractor feed, extra ribbon and a full ream of paper £40 ono. Computer HD and DD disks, sold as blanks £10 for 100. Amiga mini tower system for SCSI or IDE devices. 200W PSU with Amiga connections. Holds 3x5.25 and 3x3.5 inch drives and is shielded for media and monitor protection £50 ono. Amiga screen grabber and digitiser. Grabs full colour single screens and digitised animations on any Amiga system. Comes with RGB splitter and software, a bargain at £40 (cost £180 new). Amiga to TV SCART lead cost £10, accept £5. ☎ Jason 0115 916 7590 (Nottingham)

● **MakePath** for Vista Pro, Lightwave any version and books about how to use it. GPFax, Bane of the Cosmic Forge, Abandoned Places 2, Might and Magic and other role playing games. If you are interested call Michael on 01784 885914 (Surrey) or write to Michael Taylor • 22 St. Michaels's Road • Ashford • Middlesex TW15 2DP

● **1220/4 RAM** board (boxed) £40. A1200 original power brick £20. Colonization (boxed) £5. Civilization (boxed) £5. ☎ Andy 01604 791518

Wanted

● **Defender of the Crown** (boxed with manual) and Marble Madness (boxed with manual). Good price paid. ☎ 01636 681882 (after 4pm). Ask for Ashley.

● **I am desperate** to find a game called "Superfrog". Anyone know where I can get a copy? D. Crowther, 4 Chester St, Halifax, HX3 6LX. ☎ 01422 350159

● **16-bit sound card** for my A4000. Preferably Sunrize AD516 (Toccata, Delfina, Prelude also considered), with software. Reasonable price paid. ☎ Steve on 0181 653 9947 / 0171 416 5364 (daytime).

● **CD32 version** of Super Stardust. ☎ Robert on 01706 654010

● **Has anyone** got K240 boxed with manual? Must be in good condition. To work on A1200. Good price paid. Jamie Preston. ☎ 01780 470171 (after 4.30pm)

● **World Championship Boxing Manager**. ☎ Dorian on 0181 699 5012

● **GVP A530** urgently wanted. No memory or HD required. Must be in full working order. ☎ Andrew on 01260 297371 after 5.30pm.

● **I'm looking** for Wing Commander AGA (disk version) Does anyone have it? email Nicolas Katsidis at paladin@econ.auth.gr

● **Does anyone** have the game Willy Beamish by Sierra Online/Dynamix? If so write to Chris Seward • 10 Scafell Close • Eastham • Wirral L62 9EU email: cool@dcandy.demon.co.uk

● **Want to** purchase golf game "Links" to suit A1200. ☎ T. Harrison on 0113 295 6033.

● **Desperately seeking** instruments, disks, MODs and any other bits for OctaMED. ☎ Ross on 01933 381288 (Wellingborough).

● **CD32 games:** Pinball Illusions, Litil Devil, Shadow Fighter, Second Samurai, Virtual Karting. Will pay £5 per title. Write to C. Davis • 29 Milton Road • Swindon SN1 5JA

● **Amiga Format** issue 24 with Coverdisk. J. Banks • 78 Grange Road Hartlepool • Cleveland TS26 8JQ

● **RSI Demo Maker** and Scala for the A500 with 1Mb. ☎ Sean Hughes 01977 797654.

● **Coala by Empire Interactive**. Boxed original. ☎ Zin on 01494 536855 (after 6pm).

● **I am looking** for Blue Byte's Battle Isle and Battle Isle Data Disk. Does anyone know where I can get them? ☎ R. Hardy on 01908 586965.

● **Miracle Piano** Teaching system. David Jones ☎ 01902 782528 (after 6pm)

Personal

● **Article writers** and contributors wanted for new diskmag 'Doubleclick'. For more information please write to Mark Harman • 3 Highlea Close • St. Leonards • East Sussex TN37 7SS

● **Amiga contacts** wanted. Will reply A1200%. Full list of all software on disk. Member of Pentrisoft, promoting Shareware and its authors. Contact Stephen Graham • PO Box 8353 • Largs • Ayrshire • Scotland KA30 8HG.

● **Programmer needed** for PD games projects. (Age 14+). Send examples of your work to Sean Talbot • 101 Sole Farm Avenue • Great Bookham • Surrey KT23 3DG. ☎ 01372 801215



This month's Cover CD

Dah, dah-dah, dah... sorry can't stop grooving to all the music on *AFCD19*... tum-tum... just read on, and you'll get the, oh yeah, idea.



Music Meltdown



Amazing! Not only do we manage to cram all this stuff onto our CD we also give you four tracks of top quality audio. The four tracks that you'll find on the CD this month should all play equally well in your audio CD player or on your Amiga, as long as you have a suitable CD player program.

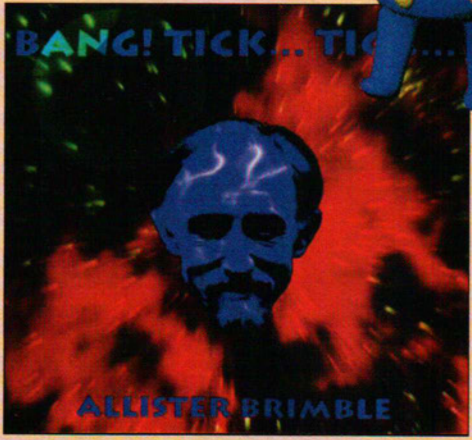


Track listing:

- **Coldcut – Atomic Moog 2000**
- **Aphrodite – Dub Moods**
- **John & Darren – Sticky**
- **Allister Brimble – Bang! Tick... Tick... sampler**

Allister's offering his CD at a special price for Amiga Format readers. Instead of having to pay £11.95 plus postage and packing, you can get your very own copy of Bang! Tick... Tick... direct from Allister for just £10 including P&P. Send a cheque made out to Allister Brimble to:

Allister Brimble
Hill House
Lapford
Crediton
Devon
EX17 6QE



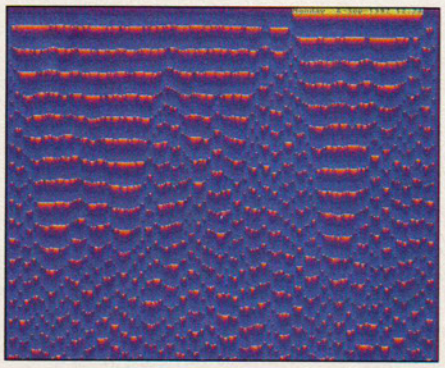
Get your copy of Allister Brimble cosmic odyssey at a special reduced rate.

But the real meat on the CD is, as ever, the data. We've got some great stuff for you on this disc, but before we start , I'd just like to point out that we are still receiving quite a number of contributions that we can't use. The reasons for this tend to revolve around two issues.

The first is that of copyright. We can't put your work on the CD and say we did it, nor can we put someone else's work on the CD and say you did it. It's not fair and it can result in a lawsuit. Drawing your own pictures, making your own sounds, writing your own programs in homage to some TV programme or film is absolutely fine, but don't go using copyrighted material, it's a definite no-no.

The other no-no is when we don't get all the documentation from you that we ask for. If you don't send a readme file with your contribution other readers won't know much about what you've sent in, and if you don't put an AF_readme file in with your disks then no-one will get to see your work because it won't go on the CD.

Not only that, you also need to include the Reader Warrant file (that can be found in many places on the CD) in with your submission otherwise – yep, you guessed it – your work won't go on the disc. Come on guys and gals, we really do hate having to ditch what looks like a really great animation just because you forgot to include a small 4k file.



Just a couple of examples of the weird wackiness of RPC.

NetBSD

AFCD19:-In_the_Mag-/NetBSD1.21

Continuing with this month's tutorial on NetBSD we have included the whole *X-Windows* installation for the Amiga on this month's CD. This also comes with the complete *NetBSD 1.21* so that you have them both gathered together, in an easy-to-get-to place, when you want to install a complete Unix operating system on your Amiga.

OnEscapee

AFCD19:-ScreenPlay-/Commercial/onEscapee_5Meg

This is the first public demo of a great new game, heading our way very soon, called *OnEscapee*. If you've ever played *Flashback*, you'll know what to expect but there's more to *OnEscapee* than just running and jumping – it certainly has far more puzzles than the old Brøderbund game.

This demo is fairly limited, but get used to playing the game this month because next month we'll be putting a full-on 50Mb demo on the CD with loads more space to explore, a great intro and scenes from later in the game. *OnEscapee* will work with a standard joystick or, if you have one, a CD[32] joypad as well as the keyboard and it needs an AGA machine with at least 4Mb memory.

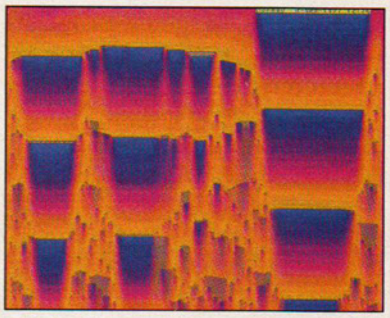
READERSTUFF

Here are the highlights from the -ReaderStuff- drawer:

RANDOM PIC CREATOR

AFCD19:-ReaderStuff-/Arne_Nielsen

Arne's programming style may not be





brilliant, but his program is. *Random Picture Creator* is a slow but effective algorithmic picture generator. You can choose between a set of different parameters and give RPC a palette to work with and it will automatically create a gorgeous image for you – ideal for making new backdrops for your *Scala* productions and so on.

We liked this program so much, it gets this month's £50 prize for a reader contribution.

***Random Pic Creator* may be a touch slow and its interface may be ugly – but it generates some great-looking results!**

CYBERBLANKER

AFCD19:-ReaderStuff-/Steve_Glover

If you have a graphics card that supports *Cybergraphics* or *Picasso96* software, you can now have a screenblanker that uses your monitor's own built-in power saving features. These allow your monitor to power down to differing degrees in order to prevent screen burn-in and also to save power, but since the AGA chipset doesn't send out DPMS signals, you'll have to have a graphics card to use this program.

WORMS STUFF

AFCD19:-ReaderStuff-/Christopher_Korhonen
AFCD19:-ReaderStuff-/Daniel_Pimley

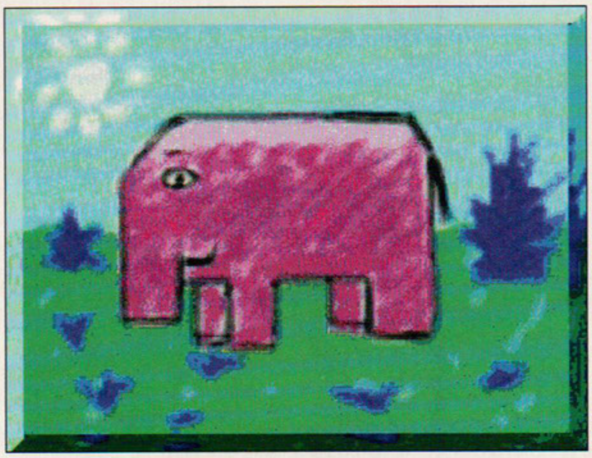
Chris and Daniel have come up with some new levels for *Worms*. If you only have the original version you should look at Daniel's 14 levels for that game, but if you have the *Director's Cut* then you should also look at Chris' contribution.

PHOTOGENICS MACROS

AFCD19:-ReaderStuff-/Martyn_Capewell

If you have a copy of *Photogenics v2* or higher, then this little bundle of joy is just what the doctor ordered. It's a set of ARexx macros that give you several new strings to your image processing bow, including an instant drop shadow and a bevel effect for your pictures. It was a

Continued overleaf ➡



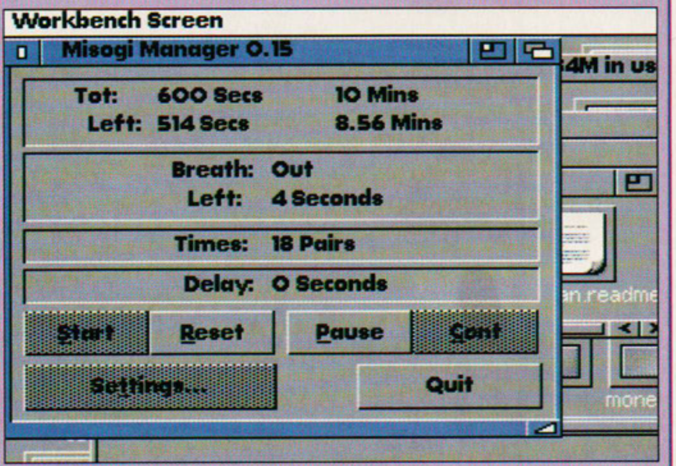
Hey, nice elephant! Martyn Capewell's excellent ARexx scripts for *Photogenics 2* give you the bevelling.

Misogi Manager

AFCD19:-Seriously_Amiga-/Shareware/Misc/MisogiMan/

If (breathe in – hold) you do some form of martial arts (breathe out – hold), you will probably be familiar (breathe in – hold) with the concept of Chi energy (breathe out – hold). This is the energy that flows through your body (breathe in – hold) and which you can channel into your martial art (breathe out – hold).

Misogi Manager is a tool to help you with (breathe in – hold) your breathing exercises and as such (breathe out – hold) can also be useful for stressed out people trying to relax (breathe in – hold). Because this sort of breathing can be quite tiring (breathe out – hold), there are settings for how long you want to (breathe in – hold) hold each breath, and for how many (breathe out – hold) breath pairs you wish to do. Try it at its default setting (breathe in – hold) and relax and you'll find yourself truly invigorated (breathe out – and relax).



Train yourself to breathe more slowly and fully and you too could live to be over two hundred years old, grasshopper...

At your fingertips

Hard Drive Installers

AFCD19:-ScreenPlay-/Utilities/HD_Installers

Again this month we have a huge quantity of hard drive installers for your favourite games. If you've got an old copy of *BladeWarrior, Rick Dangerous, SuperCars II*, or many other titles mouldering away in a desk drawer because you can't be bothered to boot from the floppy, you'll be pleased that now you'll be able to install these games to your hard drive.

Game Cheats

AFCD19:-ScreenPlay-/Utilities/Cheaters

And for those of you that don't like to lose, why not give our cheaters a go. The method varies, but the result's the same – you do better in the game. This month we've got cheats for:

Dune II
Dracula
Fears
Lemmings
NEMAC IV
Super Stardust
Testament
Tricky Quiky (it's a German game, alright? No, I haven't heard of it either)

Nintendoness

AFCD19:-In_the_Mag-/Emulation

There's loads of NES stuff on *AFCD19* for you this month, with some more to follow next month to accompany our on-going Emulation feature. There are also some updates to other emulators in this drawer.

Shankara

AFCD19:-ScreenPlay-/Shareware/SHANKARA

Talking of Nintendos, if you enjoyed *Zelda*, you'll like this. It's a top-down arcade adventure game with similar propensities but one major advantage – you can make your own adventures and pass them on to others. It's graphically simple, the only monsters are nasty pokey pokey sticks and similar non-sentient traps, but nevertheless it's got that "one more go" feel about it.

Weather Experience

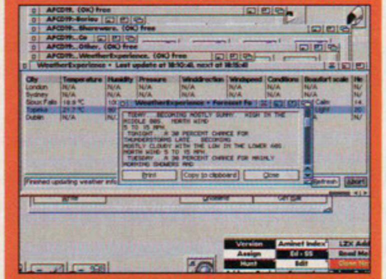
AFCD19:-Seriously_Amiga-/Shareware/Comms/Other/WeatherExperience

In keeping with the slightly frivolous items we've picked out on the CD this month, here's *Weather Experience*. It'll give anyone who's online the current

Continued ➡

At your fingertips

temperature and a whole host of other meteorological info if you live in the States. There's no space in the database for Bath but I can tell you that at the moment it's, well, it's not available. However, I can tell what the weather's like in Newtek's original home town of Topeka in Kansas...



At least the weather's nice in Kansas – no tornadoes to be seen.

DiskSafe

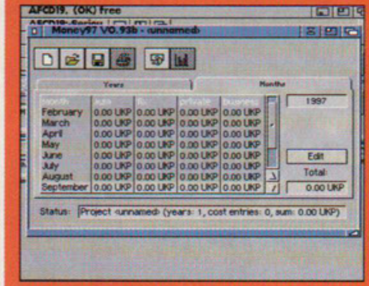
AFCD19:-Seriously_Amiga-/Shareware/Misc/DiskSafe

If you're doing stuff on your machine that causes it to crash all the time invalidating your hard drive, then this tool might be a partial answer for you. It keeps disks valid from accidential resets by catching the reset signal and writing the bitmap information first.

Money97

AFCD19:-Seriously_Amiga-/Shareware/Misc/money97-101

If you have trouble keeping track of your expenses, what about this little MUI-based accounts manager? Its German origins are obvious, but that shouldn't make a huge deal of difference and it's small enough to just keep on your tools menu and pop up whenever you've spent some money.



Money, money, money makes the Shareware world go round...

DOpus add-ons

AFCD19:-Seriously_Amiga-/Shareware/Workbench/DOpus

This drawer is where you'll find a bunch of new scripts and plug-ins for *Directory Opus*, including an update of the archive handler and some tools for web pages.

very close-run thing for Martyn not to have got the reader prize this month (sorry Martyn!), so we hope he keeps writing these scripts and sending them in...



Drop shadows made easy with Martyn's *Photogenics* scripts.



DISC NOT WORKING?

New CD Returns address!

If your AFCD is defective, please return it to the address below. Please make sure that you have followed our installation procedures correctly to ensure that there is no physical problem. Please send us the AFCD along with a description of the fault (not forgetting your name and address). A new working version should be returned to you within 28 days. The return address for faulty discs is:

CD Systems • VDC House
House Way • Wembley
Middlesex • HA9 0EH

Your *AFCD* should only need replacing if the CD itself cannot be read. If, instead, you are experiencing problems with an individual demo or application, phone our technical support line. This is open between the hours of 2pm and 5pm every Tuesday.

Tel: 01225 442244
Fax: 01225 732341
email: amformat@futurenet.co.uk ("Coverdisc" in the subject line).

Please note that the helpline staff provide assistance with technical problems directly related to the CD and cannot provide training on the software or hardware in general.

READER WARRANT

Every reader submission to the *AFCD* must have a reader warrant attached to the accompanying AF_Readme file. You can type it in off this page or take it from the various locations it is stored in on the CD (Look_here_1st!, ReaderStuff etc). A last reminder: this text must be in your AF_ReadMe, or your submission won't go on the CD – it's Future policy.

In respect of all material which forms my reader contribution to Future Publishing's *Amiga Format* I hereby warrant that:-
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(2) the material does not contain any material which is defamatory, obscene or indecent and is exempt from classification under the Video Recordings Act 1984;
(3) that there are no legal claims against the material provided;
(4) that I have full power and authority to provide this material to Future Publishing.

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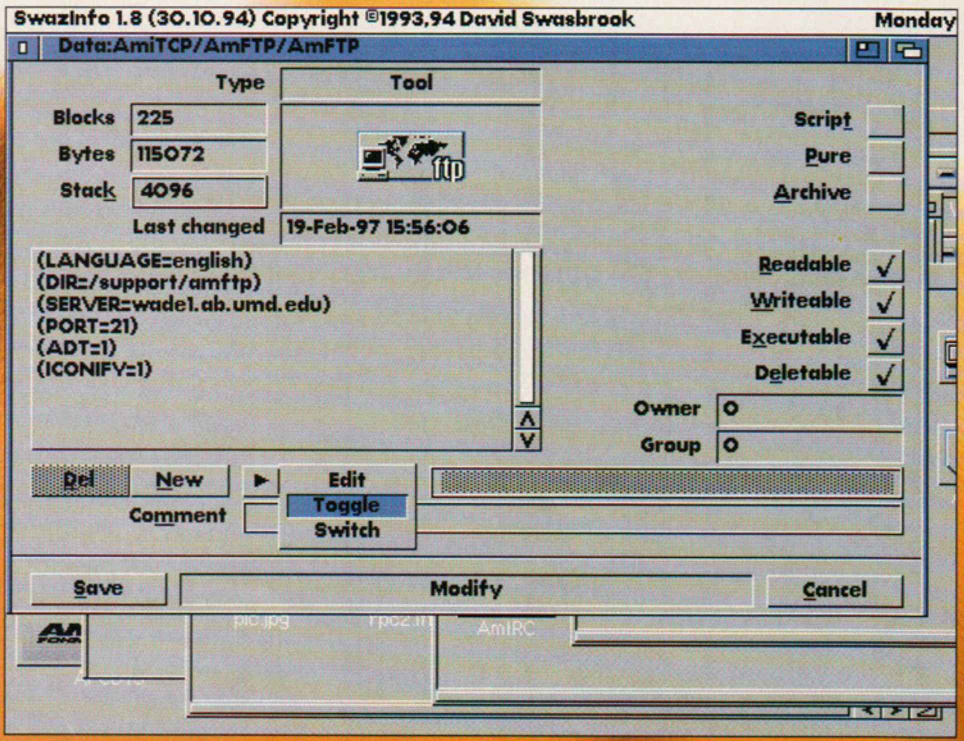
SPOTLIGHT ON A HANDY TOOL!

SWAZINFO

AFCD19:+Look_here_1st!+/Handy_Tools/SwazInfo

With any luck, the next version of Workbench will have this built-in, or at least, something as good as this is. *SwazInfo* is what the Commodore Icon Information window should have been like.

It supports drag and drop for new icon images (not *NewIcons* however, but this isn't surprising since *NewIcons* work in a totally non-standard way anyway), sorting and easy editing of tooltypes, preset default tools and icon images and much more besides.



Being able to easily toggle tooltypes settings on and off is a real boon and just one of the many in SwazInfo.

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Games disk

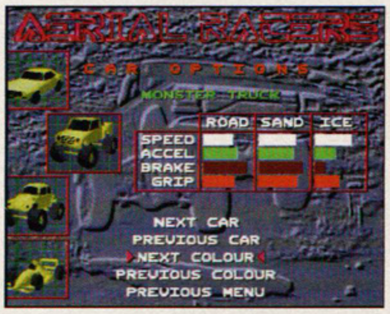
AMIGA FORMAT





David Taylor introduces one of the coolest games ever to appear on a Coverdisk. Pull on your seatbelts, tease the accelerator and prepare yourself for *Aerial Racers*!







You can change everything including the colour of your car (top) and the track (above).

Aerial Racers

Skidmarks made top down racing games popular but *Aerial Racers* proves that Freeware authors (Vaughan Roberts in this case) are also capable of creating superb quality games. This game is for one or two players (the computer can control up to three players to make a four player race) and is packed full of features and options. It comes with a variety of cars and tracks and even has a track editor to let you create your own.

If you simply want to get stuck into racing you need to unpack the game to a set of three self-booting floppies – just get three disks and follow the instructions on the Coverdisk. You will need to have the serious disk to hand because the third disk will actually be retrieved from there. You can also install the game directly to a hard drive if you have one.

When the game is loaded go to the player options using the joystick to move through them – fire is select. You need to select your car and your controls – if you just want the standard joystick, choose Joystick 2. You can also change the computer player options here. By default it plays at standard level but if you are starting out you might want to change to CPU Novice to give yourself a chance! If you really want an advantage then change the Amiga's car to a slower one so that you can outpace it!

Now click on Start Race and you will appear on the first track with three other cars. When you race you will see the cards from an isometric viewpoint. Accelerate using the fire button and make sure that you go easy around the corners because hitting the sides or other cars will kill your speed. There are five laps by default but, as with everything else, that can be changed.

To make changes to the races, go to the Race Options and choose the



Yes, I'll have that car please – what do you mean I can't?

CROINS



The red blob is a spaceship – shoot it for some extra points.

Okay, we admit it. There's not one, but two complete games on this month's Coverdisk. *Croins* is an update of the *Asteroids* game with new graphics and sounds. Simply load the game and press fire (F10 quits the game). As you play you can rotate and fire to hit the rocks that float around. When you hit a rock it splits into two smaller pieces and the idea is to destroy all the rocks to complete the level. From time to time a space ship will start shooting at you – kill it for extra points.

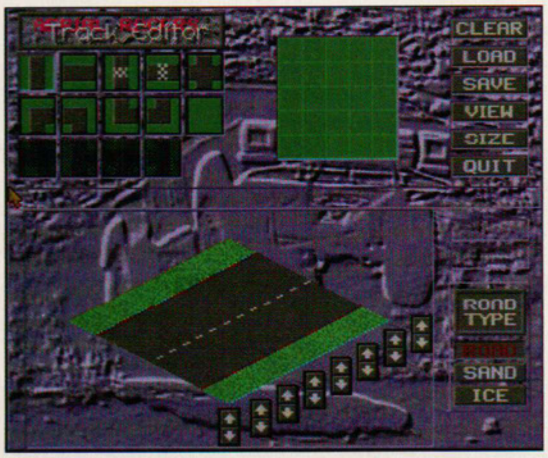
Of course if you could only spin around, you would eventually get hit through no fault of your own so there are two other games features. The first is hyperspace – pull back on the joystick and you will make a jump to another random point on the screen. The advantage of jumping around like this is that it gets you out of trouble, but the downside is that you never know where you might end up and the split second it takes to re-orientate yourself might be too much. The second feature is boosters. By pushing forward on the joystick you can move your ship forward, steering it in the direction you want by rotating the ship. If you hold the stick forward you will gain momentum but remember that you don't have brakes and you have to wait before you slow down. This means that you have to get used to rotating and shooting as you float along through space.

***Croins* is a classic game and this rendition is as fun as the original. So, go retro and take out those damned rocks!**

number of players (including human ones) and the number of laps as well as whether the race should be split screen with multiple human opponents. You can also select the gravity in force on the race, so if you want to race on the moon or even Saturn, you can! The difference in gravity will affect your race because the longer it takes to come down to the surface from jumps affects any acceleration time.

BUILD YOUR OWN

You can select different tracks from the Track Options, better still though is the built-in track editor. Select this and control switches over to the mouse. By default you will see a 5x5 track but you can change this in the size option. When you have the grid size you want, choose a piece of track from the left side and then click on the grid where you want it to appear. You can build up the track by placing the parts together, remembering of course that you need one of the checkered strips as a starting line. When you place a piece of road, you can adjust the height of the sections within that strip using the arrows at the bottom. You can also choose what the road surface should be on that section – road, sand or ice. When you are happy with your track click on View and you will see a quick render of how it'll look. Don't worry about scenery, the game will automatically generate this for the race. If you're happy, save the track by clicking on a slot, change the name and enter your details. Then go back to the track options, load the track and start racing.



Use the Track Editor to create your own track in a matter of minutes – those arrows let you create humps and troughs.

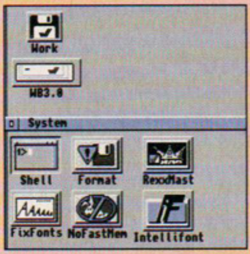
PRETTY KEEN

Any best lap times will be saved and when you quit the game you can choose to save the player/race options as defaults, saving you having to reset them every time.

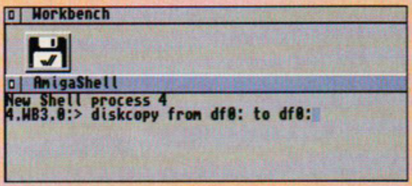
If you think we are pretty keen on this game, then you'd be right. It plays well and has all the game options you could possibly want. The track editor is simple to use and you can knock up your own tracks in seconds. Playing against the computer or friends is equally rewarding and we just hope that the author finds the time to add in some of the other cars he has planned. If you have any thoughts on the game or just want to drop him a line of thanks, email him at:
vroberts@yoyo.cc.monash.edu.au.

BACKING UP YOUR COVERDISK

Copying your Coverdisk is really very simple. Just follow the stages below...

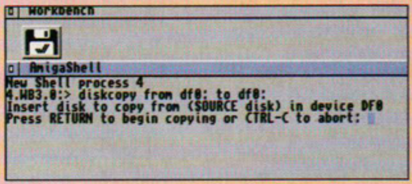


1 Boot up with your Workbench disk and find the Shell icon, in your system drawer. Double-click on this to go into the Shell.

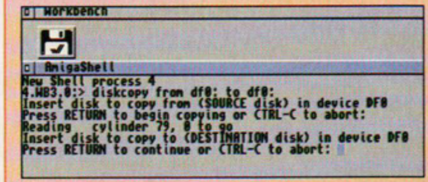


2 Type in the following line (with a zero, not the letter O), taking care to put the spaces in the correct places:

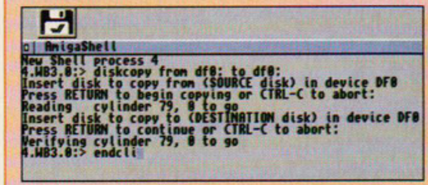
DISKCOPY FROM DF0: TO DF0:



3 When asked for the Source disk, insert your write-protected Coverdisk and press Return. All of the info on this disk will then be copied from the disk into memory.



4 Once your Amiga has read the info, it will ask for the Destination disk. Insert it and press Return. All information on this disk will be destroyed.



5 On an unexpanded machine, the Amiga may ask for the source disk again, because it copies in chunks. Finally, type endcli to close down the Shell.

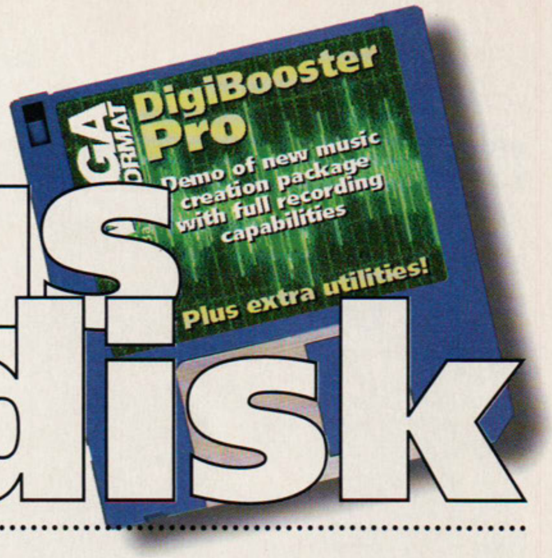
DISK NOT WORKING?

We take every care to test the Coverdisk software, but Future Publishing cannot accept any responsibility for any damage occurring during its use. If your disk is faulty, send it back, with 2x26p stamps and an SAE to:

Amiga Format (insert name of disk)
TIB PLC • TIB House
11 Edward Street
Bradford • BD4 7BH

If there is a manufacturing error then the stamps will be returned with a replacement disk.

Serious disk





AMIGA FORMAT

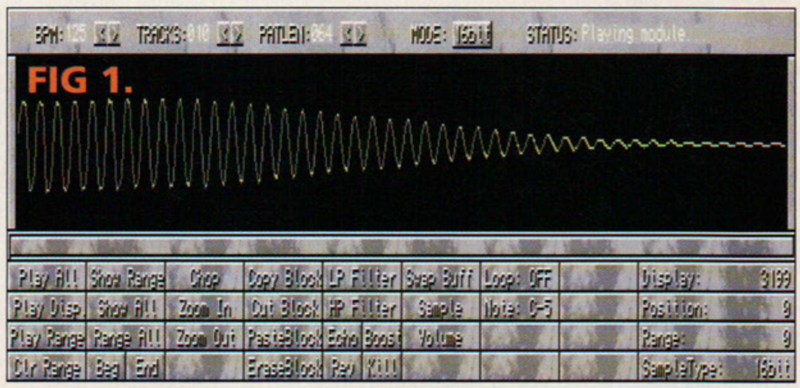
It's been a foot tapping, hand clapping issue. Here David Taylor introduces the latest Amiga music package.

DigiBooster Pro 2

Making music, as you've probably realised with this issue, is one of the Amiga's many talents. This new package is easy to use and supports most file formats, you can even import your own music and edit it within *DigiBooster*. *S3M* and *XM* files from the PC, and *OctaMED* and *Protracker* modules from the Amiga are all compatible.

"It... is easy to use and supports most file formats, you can even import your own music."

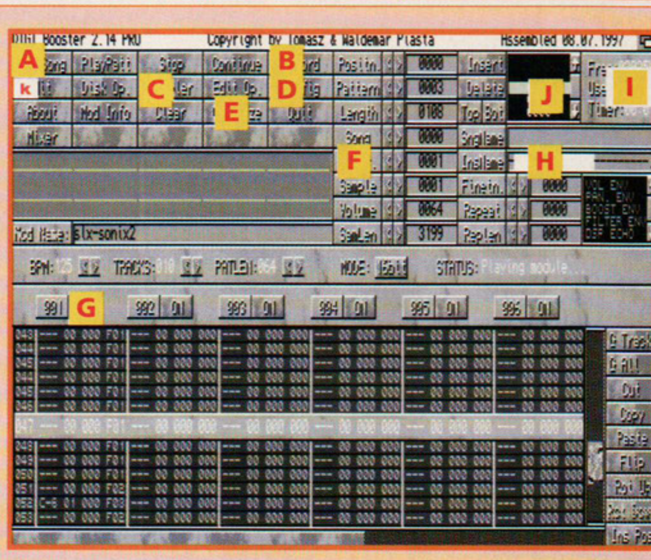
The sampler screen lets you edit the instrument until you're happy with the sound.



The package comes with one module included, so even if you don't have any of your own you can load this one up and start using its instruments to make up your own tunes. The package also uses the Audio Hardware Interface (AHI), available from Aminet, to allowing you to sample directly into the program.

We've included a guide to the interface, the keyboard shortcuts and brief instructions on getting started. When you have your instruments loaded in (if you want to use the ones from another song simply load it in, choose Clear from the File menu and then clear the song), experiment with the keyboard and the instruments. You'll see how different notes are represented by different keys. You have two choices when it comes to building a song. The first is standard editing, the way most previous music packages operates, and this means changing to Edit mode and then moving through the blocks adding the notes where you want them. The second is real-time recording. You play

GUIDE TO THE INTERFACE



A: Play the song that is in memory and currently selected
B: Lets you dictate the song by playing the instruments real time. The notes are recorded into the module.
C: Swaps to this sampler screen where you can edit the instrument to make it sound as you want it to. (see Fig 1.)
D: Opens the program configuration box so that you can adjust the program settings. (see Fig 2.)
E: Allows you to optimise the module by deleting any unused instruments or tracks.
F: The instrument number is shown here and you can cycle through available instruments.
G: Each channel has the number above it and can be muted by clicking on its button.
H: Any name for the instrument is shown next to its number here.
I: Memory usage and free memory is shown here.
J: Each module is separated into blocks. The current block is shown here and you can scroll through them.
K: If you don't want to record your song real time you can edit it manually and enter each instrument, but you must be in edit mode.

THERE'S MORE...

ADDBUFFERS

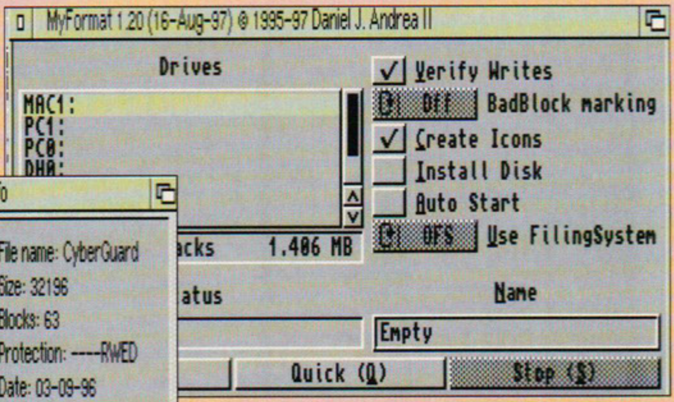
This is a small CLI command, designed as an update to the system command that allocates the memory used to buffer file listings from drives. It offers new features like the ability to use pattern matching.

AREXX CODE

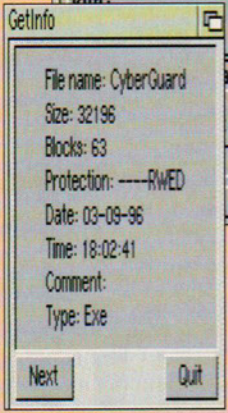
The code for this month's ARexx tutorial has been included on the Coverdisk, but for space reasons you will actually find it uncompressed on the Games disk in a directory called Arexx.

GETINFO

This program starts a simple file requestor that allows you to choose a file. The program then reports details on the file, like size, blocks of disk used, file type and creation date.



Get a better deal from Workbench by updating programs like *Format* with this new version.



A simple program that can be useful to have in your Workbench menu for quick information.

MY FORMAT

Several utilities have been written to replace the standard *Format* options. This offers all the usual features – multiple formats and formatting/installing in one operation, but also includes BadBlock mapping for damaged sectors on disks.

the keyboard while the program notes down the keys pressed. Real-time recording only works on the current block and channel and you must make sure that the cursor is placed in the very left part of the channel for the instrument to work.

As you will have noticed, the module is made up of several channels containing the instruments that are heard at any one time. It is also made up of blocks. This makes it easier for you to repeat sections of a song later. In order to make a song you need to add in blocks. This is done in the main interface using the buttons next to the block reference guide at the top. You can add new blocks using Insert and then choose which block number will be played using the Pattern buttons. The horizontal shows the channels and the vertical the notes/blocks. To choose the channel/note to edit use the cursor keys or the mouse.

Play the song as you go along to hear your work and when you're happy save the module.

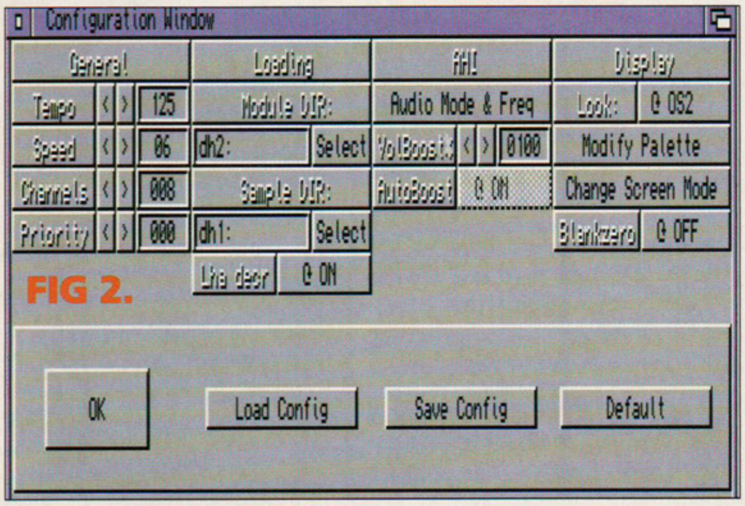


FIG 2.

Adjust the program's settings in the program configuration box.

INSTALLATION

The package will be installed directly to your hard drive, but you do need to click on the Install Fonts option in order to be able to use the program. This will copy the program's custom fonts to your fonts: directory. When you load up a song or module, it will look for its default drives (dh1: and dh2:). You can either make assigns or change the defaults in the Config section of the program.

"The full version allows you to save 128 channel modules and also comes with more features."

In this version you can only save 4 channel modules, but you can register the product for only $30 (c.£20). The full version allows you to save 128 channel modules and also comes with more features. Send your money and two disks to the authors at Tomasz & Waldmar Piasta, Ul Poprzeczna 66/6, 51-167 Wroclaw, Poland.

KEYBOARD COMMANDS

High notekeys: 2 3 5 6 7 9 0 = Q W E R T Y U I O P [ ]
Low notekeys: S D G H J L ; Z X C V B N M , . /
F1 – Octave up (there are 7 octaves; from note C-1 to B-7; 84 notes)
F2 – Octave down
lalt+F3 – Cut whole pattern (notes+commands) to buffer
lalt+F4 – Copy whole pattern (notes+commands) to buffer
lalt+F5 – Paste pattern-buffer (notes+commands) to pattern
lshift+F3 – Cut track (notes+commands) to buffer
lshift+F4 – Copy track (notes+commands) to buffer
lshift+F5 – Paste track-buffer (notes+commands) to track
ctrl+F3 – Cut commands in track to buffer
ctrl+F4 – Copy commands in track to buffer
ctrl+F5 – Paste command-buffer to track
lamiga+F3 – Cut commands in pattern to buffer
lamiga+F4 – Copy commands in pattern to buffer
lamiga+F5 – Paste command-buffer to pattern
lshift+Return – Insert blank note at cursor position and move the others down.
lshift+Backspce – Delete note above cursor position and move others up.
lalt+Return – As above, but all tracks
lalt+Backspace – As above, but with all tracks
ctrl+Return – Push commands in track one down
ctrl+Backspace – Drag commands in track one up
lamiga+Return – Push commands in pattern one down
lamiga+Backspace – Drag commands in pattern one up
Space – Toggle between Stop/Edit-mode
< (beside Z) – All channel's volumes to 0
right Amiga – Play Pattern
right Alt – Play Song
Del – Delete note under cursor
lalt+Del – Delete command only
lshift+Del – Delete note and command

Instrument/Track	Instrument/Pattern
1 – Note Up	2 – Note Up
q – Note Down	w – Note Down
a – Octave Up	s – Octave Up
z – Octave Down	x – Octave Down
All/Track	**All/Pattern**
3 – Note Up	4 – Note Up
e – Note Down	r – Note Down
d – Octave Up	f – Octave Up
c – Octave Down	v – Octave Down

Tab – Move cursor to next track
lshift+Tab – Move cursor to prev track
ctrl+a – Toggle channel on/off
ctrl+b – Mark block

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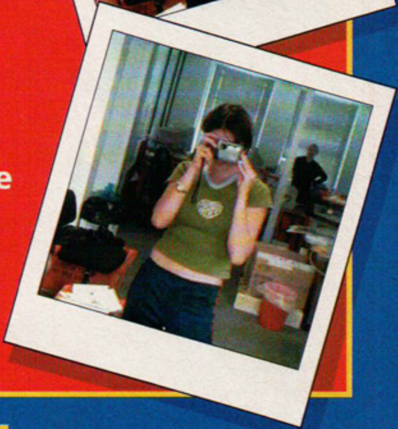
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Next Month









Snap happy!

New digital cameras allow you to get photos into your Amiga. They aren't the only route, so we explain how else to get your pictures into your computer and what to do with them once they are there.

PLUS Reviews of:

Aladdin 4D, Fusion 2, Eyetech 630 accelerator, Master Axe, Cygnus 8, Genetic Species, Final Odyssey, Uropa 2 and a packed CD-ROM with demos of Genetic Species, Hidden Truth, all the files for NetBSD and your contributions.

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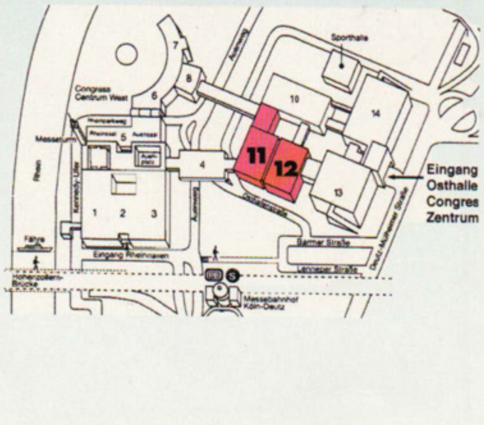
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